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VOL. II.—16TH YEAR. SYDNEY, SATURDAY, NOVEMBER 2, 1929. No. 18.

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DEAFNESS IN GENERAL PRACTICE.[1]

By ARTHUR MURPHY, M.B., Ch.M. (Sydney),
Honorary Ear, Nose and Throat Surgeon, Hospital for Sick Children, Brisbane.

THE title of this paper might well be "The Prevention of Deafness," as it is really that side that I wish to consider, but since here, as with almost all of the patients that finally drift to the specialist, the man in general practice is the first to be consulted, the heading "Deafness in General Practice" seemed more appropriate. I am seeking to show that the general practitioner should regard himself up to a point as capable of treating patients with threatened deafness. I firmly believe that the practitioner's hesitancy to commence treatment is a grave mistake, because it means delay before efficient treatment is instituted and this very delay is the fatal defect in the usual handling of these patients. I address my remarks especially to my younger colleagues whose ideas, I trust, are still plastic, because I fear that my elder brethren not without good reason have acquired rather set opinions that confirm them in the belief that deafness is of two kinds, that due to wax, which form is curable, and all other forms that are incurable. This, of course, is not the truth, but it often bears semblance of being close to the truth. It will be my endeavour this evening to destroy this semblance and to convince you that, frankly faced, deafness offers quite satisfying results, if treated early. I propose to develope my pleading in terms of the assertion: "Deafness is preventible, but deafness (that is, well established deafness) is incurable." I ask you to accept this as a working hypothesis for the present. Later I trust you will believe with me that it is far more than that, in fact that it is a moderately safe guiding rule. I am not attempting a learned dissertation on the subject, nor even an exhaustive discussion of it. Merely do I propose to present for your consideration a few common complaints or, should I say, groups of complaints that you meet in everyday practice, expose them as enemies of good hearing and show you how to render them harmless or mostly so. There are many aspects of deafness that I shall not consider at all, as they do not offer us a due meed of reward for our interest within the ambit of this paper. These are all forms of hereditary and family deafness, otosclerosis, deafness in congenital syphilis, trauma *et cetera*. One aspect we shall consider at some length—that of the acutely inflamed ear.

We shall, in short, endeavour to seek, meet and repel all foes to a normal middle ear, whether they have yet revealed their foul intentions or not. This, of course, seems to postulate that the practitioner knows how to differentiate middle ear from other states. Actually I do not ask any such thing because for his purposes in fully four-fifths of all deafness the trouble is in the middle ear and fully one-half of all deafness has its inception in some form of acute *otitis media*, so I can allow him to presume middle ear trouble in all cases in order to encourage him to commence his measures forthwith instead of hesitating as to the nature of the trouble. I only ask him to be able to see an ear drum and recognize it when he sees it and, of course, to remove wax *et cetera* blocking his view. This is somewhat unorthodox, I admit, but quite practical and very safe for the patient and in many cases I am asking the medical practitioner to institute measures before there is any suggestion of deafness. It is an unfortunate fact that most if not all practitioners believe that the otologist can do good in severe and long standing deafness and in referring the patient they have often communicated their anticipations to him. As an otologist I regret to say that this hope is quite ill founded. In an odd case quite a very good result can be secured occasionally, but as a rule the improvement, even if it is substantial, is only temporary and mostly the results confirm our elder colleagues in the truth of their classification round the presence or absence of wax. Now to win you to make serious efforts to follow my pleading. I present for your consideration the victim of the outrage, in other words the victim of deafness. Look at him pushed aside from the arena of life, often in the hey-dey of his natural term.

Consider his expression of blank and weary discontent as he gazes somewhat stupidly before him and come with me to hear his story. He was as his fellows once, but gradually he slipped into dulness, imperceptibly at first by odd fits and starts, later, but finally and perhaps suddenly, into deep, depressing dulness. Barriers seem to grow up between him and the sounds of his fellows until he heard almost nothing, though he could see what was going on. He became as an onlooker to a ball seeing the somewhat meaningless circulation of the dancers without hearing the music that activated them, the world to him had become meaningless and somewhat foolish to behold. But he complains bitterly that as outside sound receded taking its stimulative interest with it, the very furies of hell (called in short tinnitus) came to roost in his poor troubled head to torture him with their hissing and shricking, sometimes singly, sometimes in united effort with massed effect of nerve-wracking din. To his anxious pleading for relief they have shrieked: "Never, never, unless you go stone deaf and perhaps not then." His sleeping hours have been their selected times for torture and in a silent, sleeping world he alone has been banged and clattered and hissed into agonized wakefulness. Surely this is a state not far removed from insanity; it is not life, but as a dismal existence in broodings and dreariness. Is it any wonder that such a man often sets a term to his life and it is a fact that deaf people are prone to suicide.

Now I ask you, does he not merit our pity? Is an effort to save others from his fate not painfully obvious? And so I begin the search for the demons that drove or cajoled him into this abject misery

[1] Read at a meeting of the Queensland Branch of the British Medical Association on August 2, 1929.

so that I may destroy them before they repeat their foul work on some other victim.

The New Born Babe.

Let us consider the new born babe. If it has the snuffles and cannot drink properly, it may have acquired syphilis from its parents, but it may not. So here we make our first onslaught. The demon snuffles is an object of our interest. If they are syphilitic, remember that the ears may be already affected and what hope there is here, as in the general infection, lies on instant treatment directed to the general state. But if not syphilitic, what then? Well, it has some other infection in its nose, and this must be treated straight away. If not, the child will, even in its first weeks, very likely acquire an acute *otitis media* with all the sad sequelæ of the condition. Children are particularly prone to ear complications of naso-pharyngeal infections because the Eustachian tube is much shorter and wider comparatively than in the adult, but this anatomy renders prophylaxis all the more efficient.

For treatment here instil five times daily into each nostril two drops of 5% argyrol watery solution and ten minutes before feeding time instil in addition two drops of ephedrine solution, one in four thousand, into each nostril. How long will this continue? Well, that is hard to answer, but keep on if necessary until the child is six months old. A new preparation, "Monsol," in ointment form, also promises well. Use it in quarter strength and place a small piece into each nostril three times daily.

Now, if you do not succeed in rapidly effecting a definite improvement, that is, if with the first two weeks of treatment the baby is still as bad as before, you are dealing even at this stage with the "catarrhal" child, so called, and this is the baby that above all others needs your supervision and care. Here patience and persistence are necessary. If the infant does develope acute *otitis media*, take its adenoid vegetations away and keep on with nasal instillations; 1% boracic acid solution is good and even normal saline solution is believed to benefit. Do not essay nasal douching; it is not practicable and may be dangerous.

If the child resists all measures, even the removal of adenoids, then doubtless the sinuses are to blame. Even at birth there is a well developed maxillary sinus and you must settle down to patient watching. Do not give up and whenever the child is a bit off colour, look to the middle ear. Here we shall not pause to consider acute *otitis media*. That comes later.

Now, apart from snuffles and the catarrhal child there come in infancy the infectious diseases stage of life, a really violent middle ear onslaught on the part of several acute general infections. Principally these are influenza, bronchitis and broncho-pneumonia, intestinal infections, measles, whooping cough, diphtheria and chicken pox. Scarlet fever is not a great menace in infancy, though it is in later childhood. Now in the main these infants give no local indication of trouble, but I assure you that a great number of them developes acute *otitis media* and if you will possess yourself of an electric auroscope and look, you will be astounded at its frequency. I plead with you not to be doubtful because the child does not seem to complain. Do please look and see. As you well know, discharging ears are quite common in these diseases I have mentioned; how much more common must be an inflamed middle ear that does not discharge? And I repeat again, in these infants pain localized to the ear or rather revealed as such is not to be expected and therefore the practitioner should as a routine inspect the ear drum. For prophylaxis what I have said before applies here also, except that now perhaps a formalin mint tablet or a lozenge (and again the new "Monsol" preparation in this form promises well) may be prescribed for frequent use as a routine. The treatment of the ear I again refer to a later part.

Early Childhood.

By now we have got the child out of infancy into early childhood. It has passed its second year and is making to its third. Now its tonsils begin to be a definite local storehouse of germs whose proximity is very threatening to the ear. Further, we often get now the adenoid fever style of thing, that is, the child is subject to head colds with a passing fever and slight indisposition, but in between it seems pretty well. Of course, it is still liable to the acute disturbances already mentioned with the addition now of scarlet fever as an increasingly important foe and it will be many years before it escapes from this herd of vicious and cunning assailants. In truth there are so many causes for ear disturbances now, that it is wonderful that so many escape them, but as it is and as you well know, earache, deafness and discharging ears are quite common in early childhood.

Now what to do in the acute febrile states. The prophylaxis I have already given should be instituted in the adenoid fever child and the adenoids should also be removed without hesitation. There is no age objection whatever to this procedure, even at a few weeks it should be done if necessary, much more so is it to be done after suckling has ceased. And what of the tonsils? After three and a half years have no hesitation, remove them entirely. Before then I believe they have value and I remove them only if their state necessitates it or for some other very urgent reason.

Summary of Prophylactic Treatment in Infants and Early Childhood.

May I now just briefly review what I have said in order to emphasize the simplicity of the measures I ask you to carry out. In the baby with the snuffles, if not syphilitic, instil some suitable drops five times daily into the nostrils and vasoconstrictor drops before feeding so as to allow nasal respiration especially at this time.

In all acute febrile states of infancy and childhood prescribe suitable antiseptic nasal drops, a mouth tablet or lozenge where practicable, and always watch the ears.

In the adenoid fever child remove the adenoids forthwith. In the catarrhal child that resists treatment, presume nasal sinusitis to be present.

In all conditions resisting treatment remove the adenoids at any age and after three and a half years remove tonsils as well.

These measures should be instituted whether acute otitis has supervened or not, but if they are instituted early, I make bold to assert acute *otitis media* will be less prevalent. Just one word more before I pass on to the question of the acutely inflamed ear. After the infectious diseases, especially after measles and scarlet fever, always test the hearing, even if there has been no complaint about it and if the hearing is defective, send the patient on to an otologist. Do this also with the catarrhal child who resists your own treatment.

The Acutely Inflamed Ear.

Histo-Pathology.

On the question of the acutely inflamed ear let us first consider briefly some aspects of its histopathology. To begin with it almost universally results from a simple extension by contact along the Eustachian tube of a naso-pharyngeal infection. Various organisms are prone to cause it, the staphylococcus never. In its train follows 50% of all deafness. With the bacterial invasion there immediately results a reaction on the part of the middle ear mucosa that leads to the transudation into the cavity of blood fluid and leucocytes and perhaps mucus. This always happens whether it can be recognized or not and irrespective of whether the process progresses further to suppuration and necrosis. So then a red ear drum means transudation in the middle ear. If the process is mild then the amount of transudate is small and *vice versa,* but it is there always and for our present purpose also the ear drum that is red in its uppermost part and has a streak along the handle of the malleus is concealing an acute *otitis media* behind. Much more so, of course, is there trouble if the ear drum bulges or loses its distinctive appearance.

Within twenty-four hours of the beginning of the bacterial invasion some transudate has appeared. If the process is violent and progresses to suppuration, then the following sequence is apt to ensue: definite cell infiltration, destruction of surface epithelium which with the transudate constitutes pus, and if the infection is severe, the periosteum and even the bone may become involved, resulting even in body necrosis as is common in scarlet fever.

The more intense the destruction, the more prolonged and difficult the healing, but the point I make is that every hyperæmic *membrana tympani* in an acute naso-pharyngeal condition means transudate with cell contents in the middle ear and the last of it may be slow to absorb after the cessation of the infective process leading to organization and adhesions within the cavity of the middle ear. Now even minute adhesive conditions involving the oval or round windows mean severe deafness and the liability to this happening is very great in some ears owing to their peculiar structure which can be recognized only on dissection of the temporal bone. These ears are comparatively common, so then you see the quantity or quality of exudate is not a guiding star as to formation of lasting adhesions. Some ears as the result of quite a small amount of exudate where the *membrana tympani* never bulges at all, may go deaf after a mild *otitis media acuta* and to remove this small fibrosis is often beyond human capacity. Further the commonest healing in all but the mildest infections results in a certain amount of permanent adhesion.

Prophylaxis.

Seeing then the possibilities in hearing affliction of even mild middle ear inflammation, I use the excuse of my name and ancestry to insist that middle ear inflammation must be treated before it reaches the middle ear. That is, institute prophylaxis in all acute pharyngeal conditions even in the common head cold. Boracic acid nasal douching, throat paints, nose ointments and tablets and lozenges have their place here. If perchance the infection does reach the middle ear and despite our best endeavours there will still be many such cases, we have to face the problem of the acutely inflamed ear.

What is an acutely inflamed ear? A red *membrana tympani* in the presence of naso-pharyngeal infection is a sign of an acutely inflamed ear and it becomes a comparatively and superlatively acutely inflamed ear if it progresses further to cause bulging of the *membrana tympani* and loss of its characteristic appearance. But before one examines the *membrana tympani,* what constitutes the acutely inflamed ear? In the presence of any naso-pharyngeal infection from a prophylactic viewpoint deafness or tinnitus in all circumstances represents an acutely inflamed ear until it has been proved by inspection not to be inflamed and perhaps another cause is discovered. If you are more tolerant than this, you are bound to miss many an acute ear lesion and I repeat that 50% of all deafness is due to the acutely inflamed ear. You are all familiar, I am sure, with the cases mostly met with during influenza epidemics in which after a day or two of deafness and without the appearance of any pain the ear or ears have discharged profusely for some time. Pain in the middle ear is a question of pressure and some organisms cause tissue destruction so rapidly that the *membrana tympani* is eroded and perforated before the element of intratympanic pressure has become high enough to cause pain. You would not say, however, that your patient did not have an acutely inflamed ear because he did not have pain. At least I hope you would not. because he did have an acutely inflamed ear. Similarly in children in the cases mentioned of acute infections the ear discharge, so commonly seen

without any pain symptom being apparent, always and without exception means a burst *membrana tympani* in acute suppurative *otitis media*.

Treatment.

So, then, now that we have recognized that acute *otitis media* is a common complaint if looked for, what is to be done with it you ask. Well, the therapeusis is simple. While it is still inflamed and before bulging is evident and while the *membrana tympani* still retains its landmarks, instil Burrow's solution or glycerine acid carbolic 6% every four hours. The way to do this is to place the head in the lateral position so that the external auditory meatus becomes a well with the *membrana tympani* at the bottom. Instil enough to cover the *membrana tympani* fully and keep the head in that position for at least five minutes by the clock. If at the end of twenty-four hours you cannot satisfy yourself that the condition is better, incise the *membrana tympani*.

When the ear drum shows signs of bulging, even if the bulging is localized and not general, incise it forthwith. A bulging *membrana tympani* means only one thing, pressure—fluid pressure—within the middle ear sufficient to make it bulge. This pressure as well as causing the outward *membrana tympani* bulge, is causing a comparatively inward bulge of the occluding round window membrane and also is exerting its effects at the oval window and it is highly infected fluid. The fact that the *membrana tympani* is bulging means that its fibres are softened, else they would not bulge, so also are the membranes guarding the inner ear softened. The longer the pressure lasts, the more serious the effects.

It is fortunate the *membrana tympani* is generally eroded before the inner ear is invaded, but not always. Certainly, with the pressure on the *membrana tympani* released, the danger to the inner ear automatically ceases except in very rare cases. Therefore the advice is, incise all bulging *membranæ tympanorum* as soon as the bulge is recognized.

If there is pain and the *membrana tympani* is red, even if you do not recognize a bulge, incise also without misgiving. Here it is wise to insist that if you know the landmarks of the *membrana tympani* and in a case of ear pain you cannot recognize any suggestion of them even if the *membrana tympani* does not look red, you must incise. You see it often happens that the red and bulging *membrana tympani* is covered on its external surface with dead and dying epithelium in profusion and the light reflex off this is whitish, not red.

The technique of incision is very simple once learnt and also it is very simple to learn. In children a general anæsthetic is always desirable. In adults also, but in many cases the application of Bonain's mixture to the external surface of the *membrana tympani* for twenty minutes will secure efficient anæsthesia.

A good illumination with reflected light or electric auroscope is necessary. Clean the external meatus of wax, *débris et cetera* and fill the canal with absolute alcohol for ten minutes before incision. Use the widest speculum possible and carry the incision knife straight down to the *membrana tympani* without touching the walls. Incise from above down or below up, as best suits your convenience, but let the incision cover at least one-third of the *pars tensa* of the *membrana tympani*, preferably behind the handle of the malleus.

If the knife grates on bone, do not be alarmed, ease off the pressure you are using, that is, slightly withdraw the knife, but keep on with the incision. The chances of doing harm are so remote as to be quite negligible. Now, without further ado withdraw the knife and insert down to the *membrana tympani* a strip of 1·25 centimetre (half inch) sterile gauze, dry or soaked in absolute alcohol. Renew the gauze at least every day and if the discharge is profuse, which it is apt to be if incision is made late, keep a sterile wool tampon on the gauze and keep renewing as often as it becomes soaked. But never change the gauze except under strict aseptic or if not possible severe antiseptic conditions. This rule is golden and do not cease to use gauze as long as discharge is escaping through the *membrana tympani*.

After a few days, on an average five, but the duration depends on the infecting organism as well as on the stage at which incision was done, the discharge ceases to come through the closing opening in the *membrana tympani*, having by this lessened much in quantity. Now it is necessary to institute one of the most important measures in all prophylaxis and it is to be done in all infected middle ears no matter how mild or how severe the infection, once the process of healing is definitely on the way. It is Politzerization and it should be done every day at first, less often after four or five days and continued up to three weeks. Its object is to dissipate the remaining transudate in the middle ear by an air blast and to distribute it over the surfaces of the middle ear so as to aid absorption and prevent stagnation in mass in any one area. It is a wise precaution also to instil spirit drops after cessation of the gauze wicks for a few days.

Now there remains little else to be said from the viewpoint of prophylaxis, except to point out that in many patients deafness commences insidiously without any of the causes already enumerated being at fault. These patients mostly belong to adolescense and adult age. They almost all believe they are suffering from wax and in addition to dulness of hearing they complain of tinnitus as a rule. Here I ask that if wax is not the cause of the symptoms, you send the patient forthwith to the otologist and insist on the necessity for immediate treatment. If you think you are able to deal with this class of patient, I can only apologize for presenting this paper to you, because already you are moderately expert in these matters. In the case of

children, however, remove the tonsils and adenoids forthwith.

On the subject of the discharging ear again, I have nothing to say except to ask you to send the patient to an otologist if the discharge has lasted more than four weeks or if the discharge is recurrent in nature. This advice I believe to be particularly sound, because here, unless you understand these conditions pretty thoroughly, you are playing with fire in which patients' lives are apt to be consumed.

In this connexion I vividly remember a small sequence commencing with the appearance in my consulting rooms of a patient from North Queensland, suffering from antrum trouble and an intermittently discharging ear of several years' duration. He wanted relief for his sinus condition, but refused even inspection of his ear. I duly attended to his antrum and he went off to the northern rivers of New South Wales to see some old friends.

The next episode was a conversation with a successful and capable practitioner of vast experience who related that he never ever saw patients with mastoiditis, they all had merely running ears. The next happening was the reappearance in my rooms two days later of my patient with pain in the side of his head, the same side as his running ear which he had had for three days. His temperature was 38·8° C. (102° F.). Next day he died and autopsy revealed meningitis spreading from the ear. He also, as he informed me on his first visit, had been assured by his medical adviser in the north in whom he had great faith, that his ear was nothing to worry about and so it took three days of severe pain to convince him that it was something to worry about, but unfortunately he realized it too late. This surely is tragic.

The time at my disposal is limited and in any case I desire to be as brief as possible. I have asked you to listen to my pleading which in parts may seem strange and perhaps unorthodox, and I do not for a moment believe that my ideas are the only ones in regard to the prevention of deafness that are worth while. What I do claim is that I have only asked you to recognize in ordinary everyday conditions an element of direct danger to future hearing and to take steps to remove it from the beginning, steps for the most part exceedingly simple.

I have asked you especially to examine for acute *otitis media* instead of waiting for complaints from the patient, particularly in children, and I have asked you to make an incision in the *membrana tympani* as early as possible. I have not suggested anything that is particularly difficult to do, and I have not indicated any proceedings likely to result in serious sequelæ if inefficiently done. Without some preliminary setbacks very little has ever been accomplished and when every practitioner has interested himself in the possibility of deafness and has accustomed himself to institute early measures against it, rest assured the problem of the vast mass of deafness has already been solved.

Conclusion.

Now it is fitting that I should not close without offering reason for the faith that is in me and this is particularly pleasing because I am able to present to you two different instances of the value of prophylaxis and early treatment carried out here in Brisbane entirely distinct and separate from any suggestion on my part. Before I mention them, however, I want to say that the clinics where prophylaxis is practised manifest uniformity in their deafness statistics and this very uniformity is the best argument in favour of the measures I have suggested in the course of the paper.

The figures show that the age incidence of deafness has been raised over a decade; whereas patients in the late twenties, thirties and early forties were numerically preponderant before, now those in the late forties and fifties predominate. Further analysis shows that actually these fifth and sixth decade patients are not more numerous, but that sufferers in the earlier stages are remarkably less and further investigation shows that the deafness of the fifth and sixth decade patients antedated the institution of prophylactic measures.

Now to come nearer home at the Brisbane Hospital for Sick Children where for some few years I have been privileged to work, over a decade ago Dr. Graham Brown instituted the practice of early complete tonsillectomy and adenectomy in all possible circumstances. His successors agreeing with this idea have also advocated similar measures and the school medical services seem to have held the same ideas.

Nowadays mastoiditis that used to be fairly common is very rare and most of the patients come from areas not benefited by earlier services. At the same hospital Dr. Patterson, during his five years' occupancy of the superintendentship, struck by the number of discharging ears appearing in the course of febrile diseases, set out to examine the ears. It was a short step to institute early incision of the *membrana tympani* which he now practises as a routine. The result is that, whereas previously discharging ears after subsidence of the causative disease were a big feature in the out-patients' clinic, they are rare now, because early incision has meant early cure and the ears are dry before the child leaves the ward.

As I said, it is particularly pleasant to be able to relate these things here. Now I have done and in thanking you for your patience in listening to me, I assure you that if I have convinced only one member of the necessity of prophylaxis I shall be amply rewarded, but I shall be particularly delighted if I have won you to practise early incision of the *membrana tympani*. Again I repeat "Deafness is preventible, but deafness is incurable." I thank you.

NOTES ON MATERNAL MORTALITY DURING THE PUERPERIUM.

By J. W. DUNBAR HOOPER, M.D. (Durham),
Melbourne.

BY the courtesy of Professor Marshall Allan and Dr. E. S. Morris, of Sydney, I am able to make use of the following figures: In Australia in 1928 the

maternal death rate per 1,000 live births was 5·99; in Victoria in 1928 the maternal death rate per 1,000 live births was 5·91; in Victoria in 1927 the maternal death rate per 1,000 live births was 5·59; in New South Wales in 1928 the maternal death rate per 1,000 live births was 5·4; in New South Wales in 1927 the maternal death rate per 1,000 live births was 6·56; in Sweden in 1924 the maternal death rate per 1,000 births was 2·39. In Victoria in 1928 90% of the patients were attended by doctors. In Sweden in 1924 most of the patients were attended by trained midwives. In 1928 among 58,072 women confined in New South Wales, 46,394 were attended by doctors. In the same year among 35,656 women confined in Victoria 32,665 were attended by doctors.

Now it is useless any of us making excuses about this death rate and saying that it cannot be helped, or excusing ourselves that a number occurred in a bad season, in very hot weather or very rainy weather. We must not shirk the fact that the death rate is far too high. The investigation made two years ago by Dr. Marshall Allan on behalf of the Edward Wilson Trust has not hidden the truth from our eyes. Indeed, his patient and honest work brought to light certain facts in the whole matter.

At one time I thought the incidence of mortality was increased by the fact that many unnecessary operations were done on parturient women. But there were less operations done within the last two years and yet the death rate is increasing until the maximum is 5·9 per 1,000 (1928). Now any thoughtful observer must realize that very seldom do epidemics happen along and increase maternal mortality. The diseases which do seriously affect the maternal mortality rate, are scarlet fever, enteric fever and diphtheria, but many years have passed since there have been such epidemics in Victoria. I thought at one time that some of my medical friends were keen to encourage operative interference during labour and I know that some of these cases did end fatally, but during the last two or three years, thanks to the improved methods of teaching, medical men are not so keen to interfere surgically to terminate labour as they used to be. Many years ago "meddlesome midwifery" was strongly reproved to students, and in this direction Dr. Arthur Wilson has been a power for good during his term of office as lecturer in obstetrics in the University of Melbourne. It must seem wonderful to all medical men who have had much experience in obstetrics how Nature allows a natural labour to terminate successfully if the patient be left to her own resources. But even the simplest labour is often followed by sepsis, especially if any form of surgical interference takes place.

We have been for years obsessed by the idea that streptococcal infections are fatal in maternity cases, but I believe from some experience that staphylococcal infections are very serious, especially when combined with streptococcal (that is the *Staphylococcus citrius* combined with the *Staphylococcus aureus* or *albus*) and these cases terminate fatally within two months or so of the confinement, especially after mammary abscesses.

There can be no question that the medical profession is very keen to prevent lacerations of the vagina or cervix during parturition and that much ante-natal work has been done of recent years which prevents eclampsia. Fruitful causes of puerperal sepsis in my knowledge are intestinal infections which precede parturition and are uncured at the time of the confinement, but the profession is now fully aware of the value of ante-natal treatment and precautionary measures are taken that the intestinal tract should be clean during the course of labour and if possible to prevent cervical or perineal lacerations.

Now to come back to our original thesis, mortality during the puerperium, it seems to me that from my own experience of nearly six thousand confinements attended by myself and a good many others seen in consultation, manipulative interference should not be undertaken in obstetric cases unless the life of the mother is in jeopardy immediately or remotely. If possible and unless valid reasons are against it, it is wise, I believe, to let the patient deliver herself. The application of short forceps after two hours in the second stage is often most helpful in saving the perineum and conserving the patient's strength, especially if one remembers to use the forceps in the "curve of Carus." Trauma undoubtedly militates against the patient and affords pabulum for the growth of septic organisms and also encourages the entrance of organisms into the veins. Three times I have opened the abdomen during the puerperium and found clots in the veins which on examination proved to be full of streptococci, necessitating a very wide dissection of all veins in the region of the infected focus. These patients all recovered and one had a living child four years afterwards. On the other hand a prolonged labour or excessive pain in a very sensitive patient induces mental and physical depression.

We are now realizing the importance of keeping the anus and the skin around it and the vagina clean during parturition. Nowadays the general health of the patient is always thoroughly investigated by the medical attendant and often conditions hitherto unsuspected have been thus revealed. One common cause of protracted illness and even death itself is due to pathogenic bacilli invading the colon. Quite recently an extremely able doctor conducted the birth of a living child. He had not been told that the woman had had colitis and diarrhœa for two months before he attended her. She died a week after confinement from septic peritonitis.

A point I would stress is the early treatment of severe hæmorrhage which occurs during labour, either from *placenta prævia* or atony of the uterus. It is unwise to allow the patient to become so debilitated[1] by constant hæmorrhages or frequent small hæmorrhages that she is unfit to undergo the trial of an ordinary labour and still more unfit to endure the stress of an extraordinarily difficult con-

finement. The cause of the trouble should be ascertained very early and treated. It is far better to remove an infected hæmorrhoid (with careful asepsis) before labour commences than to wait till the puerperal period when the surrounding veins may have already become infected. I have twice opened the abdomen and removed infected veins from the pampiniform plexus with satisfactory results.

Another cause of trouble is the fact that sometimes we neglect to examine the urine for sugar or for the colon bacilli during the last months of gestation and then the sudden stress of labour induces anuria, myocardial spoiling, coma with or without convulsions and death.

Nowadays it is frequently pointed out that the obstetrician must be most careful about cleaning his hands and having no sources of infection in his clothing; he should be sure that rubber gloves are sterilized, that is boiled for ten minutes before being used. Nurses in small obstetric hospitals often scamp the boiling process.

Of course, before the woman goes into confinement her health is thoroughly examined for any obscure troubles of the nose or antra. We must be sure that the urine is normal and that there is plenty of it. Nowadays special care is taken that the urine becomes normal before parturition and that all causes of bacilluria, albuminuria or glycosuria are deleted, remembering that the stress of a confinement often throws the kidneys out of action and perhaps even suppression of urine follows. The pulse pressure is more important than the systolic blood pressure.

Like many other practitioners, I do not consider the term puerperal mortality at all satisfactory. It does not fully meet with the requirements to explain the position. One always dreads the advent of sepsis during a puerperium. We know that many infections, intestinal and otherwise, or focal infections are fatal and, of course, eclampsia, although better understood nowadays, remains a very serious complication of pregnancy. The term puerperal mortality is unfortunate. We might say mortality following parturition and include all conditions which kill the patient after parturition under this heading. There yet remains the enormous field of puerperal morbidity.

Now contrasting the patients attended by doctors and those attended by trained nurses or midwives, we must not shut our eyes to the fact that more died under the hands of doctors than under the nurses (see the figures given at the commencement of this paper). It is quite possible, of course, that the midwives, especially the bush nurses in Victoria, had normal cases to attend, the medical men getting the severer cases. Even that, however, must not influence the investigation. I personally feel convinced that, unless every medical man realizes how very important the obstetric work is and feels that he is but part of the body of machinery which deals with this subject, we shall never reduce mortality. In other words, the medical man must feel that he is personally responsible for trauma, for many cases of eclampsia, for *post partum* hæmorrhage and for the actual mortality.

Some men are exceedingly fortunate. They may be living among a class of patients who can afford to pay for the best attention and for the best nursing. But these patients demand and should have the best and most alert medical care and high class medical nursing, for their friends are specially prone to demand that the doctor should do something for all patients in protracted labour. The doctor is fortunate who can be strong enough to resist the importunities of relatives or influential friends to interfere in these circumstances.

It is wonderful to me how extremely careful and thoughtful most of the younger generation of medical men are about their obstetric patients. It is very often the fact that when a man has had twenty years or more of successful obstetric work, he is apt to become slack and overlook primary causes of trauma which in his early days would have worried him exceedingly.

It would be as well if the medical man took the trouble to examine the house in which the patient is to be confined with regard to its domestic arrangements, especially the drains. I remember once examining the house of a lady who came to Melbourne for her fifth confinement and I found a disused sewage tank in the garden which was directly connected with the kitchen and with the bathroom next the bedroom and the stink from this was awful. It took two months to have all this put right. Undoubtedly it is wiser for most women to be confined in a healthy and well-equipped private maternity home under the charge of a skilful, conscientious nurse and a capable doctor who will refuse firmly to admit into the hospital any patient with puerperal sepsis.

A few years ago I sent a patient to a private hospital and I did not know that there had been two deaths from puerperal sepsis there during the previous months. The doctors concerned did not tell me and the nurse did not tell me and the nurses were still allowed to attend new patients. Ultimately the hospital was shut up, but considerable damage had already been done to several patients. The moral responsibility of a doctor who allows a patient with a septic condition to continue in a private hospital without informing his colleagues is very great. Of course, there is no compulsion for a man to inform other medical men that he has such a patient in a hospital. It may not be his fault, but the feelings of his brother practitioners, as well as the risk to the lives of other patients, are of great importance and should be considered. I remember attending a lady in her third confinement at a private hospital. Fortunately I delivered her myself, but I did not know that the nurse who was nursing her, had already had two fatal cases on her hands during the last three months. As far as I knew, the nurse did not make a vaginal examination of this patient.

I do not think that medical men would receive with gratitude information that certain patients

with septic infection were in a hospital to which their own patients were being sent, because it is unlikely that the owner of the hospital would wish to offend the doctors who unfortunately had such patients already in her hospital.

Of course, I know that all women who die after confinement, do not necessarily die of sepsis. I had one who died after confinement with meningitis from a suppurating cerebral abscess originating in the internal ear. I have attended two patients who died on the fifth day from anuria in chronic Bright's disease of which I was uninformed. If I had had these women under my own observation for antenatal care, I would have discovered it. I think the medical man, who, knowing that a patient has some intestinal trouble or some chronic disease, does not inform the obstetrician, is criminal.

For some years, often during the hours which should have been devoted to sleep, I have contemplated what was to me a very intensive question, namely, that it would be interesting to know the opinions of well educated men and women (not doctors) on the maternity problem; last week I found it in an article by Miss Dorothy Bromley in the June number of *Harper's Magazine*. I believe that every medical man is seized with the importance of reducing the death rate among maternity patients and I think that it would be well worth while if medical men would take the trouble to find out the opinions of the educated laity as to why the maternity death rate has not been appreciably reduced as a result of the work and discoveries of Pasteur and Lister.

Now in this magazine they say that the Netherlands have a maternity death rate of 2·3 per 1,000, Italy 2·7, Germany 5·3, Scotland 5·8 and yet in Australia we have a maternity death rate of 5·99. To the lay mind it is a cause of wonder why the maternal mortality is so low among women attended by trained obstetric nurses and yet so high among the patients of medical men. That is a crucial point. Some say bluntly that the nurses are taught to be clean and patient. In some places they have an education lasting over two years, whereas the young medical men, urged on often by relatives of the patient, are stimulated to terminate the labour as soon as possible and it is a curious thing that the men with a large experience of obstetric practice are not the most frequently called in by their *confrères*, whereas if the midwives desire a consultation they usually secure the services of the best obstetric physician available.

In the Chicago Lying-in Hospital there were five deaths out of 11,605 deliveries. In the New York Lying-in Hospital (the largest of its kind in the United States of America), there were fewer deaths than one in a thousand and in the Long Island College Maternity Hospital there were five thousand deliveries without a single death from sepsis! In the Johns Hopkins Hospital, Baltimore, they have a higher septic rate among the coloured patients than among the white patients and throughout the United States no doubt coloured women have a higher death rate than the white women. Here undoubtedly the hygiene of the patients is unsatisfactory.

Now the Americans have taken lately to preaching against operative obstetrics, and some of their own obstetric physicians have written and preached against this operative mania, and some men openly blamed the meddling obstetrics of the busy practitioner for the high maternal mortality. Dr. George Osborne Polak, head of the Department of Obstetrics and Gynæcology, Long Island College, decries the lack of conscience on the part of many doctors "who call in a consultant at the last minute, not to save the woman's life, but their own faces." Against Cæsarean section the modern view is that it is time to call a halt in this once popular method of delivering women. All observers stress the value of pre-natal care and observation by the practitioner and I think it would be wise if medical men, especially in first pregnancies, charge a higher fee which is to include all pre-natal care. That means that he would pay visits to the patient in her own home for at least nine days after confinement and keep in touch with the patient for some three or four months after confinement by consultation at his residence. For the ordinary industrial working man five guineas should be the lowest fee for this work and up to six or seven guineas for the whole three months' supervision.

On the training of students and nurses I need not enlarge. I leave that to Professor Marshall Allan. There is a curious opinion appearing among the American people: they think medical students attach too much importance to surgery and there is some suggestion of leaving surgery to post-graduate work, keeping up a course of anatomy and physiology, and largely concentrating on obstetrics as seen by the general practitioner. Dr. Walter Chipman, of Montreal, complains that "the glamour of the operating room has lured the student and captured his imagination," and Dr. Palmer Findley adds that "it is no small wonder that the student has little stomach for the watchful waiting in the lying-in room."

It is a far cry from the old-fashioned "granny" or "howdy" to the modern highly trained obstetric nurse. In my experience of the former they have often led to ridiculous situations. The modern midwife is, however, well educated, clean and keen on her work, is most delightful to work with and a welcome friend to the sick woman. The total number of midwives who have been registered since the commencement of the act is 4,512 in Victoria. Since the introduction of the act 1,332 have been deregistered, leaving 3,180 still on the register.

There is no evidence at present as to how many patients were attended by doctors and how many were attended by midwives, although it is perfectly obvious that there are not too many well-trained midwives among us. But our own knowledge is available, though unofficial.

It is sometimes said that the young practitioner with many lodge patients takes more than he can supervise. It would be well if the practitioner had a limit, say, at the outside of five hundred obstetric patients a year and this with four guineas to five guineas a confinement would be a strong base for his general practice.

The number of births in New South Wales in 1928 was 54,800 and the number of maternal deaths 327. The maternal mortality, excluding illegal operations, was 5·4 per 1,000.

Now I suppose the two outstanding men in the United States of America are Dr. Whitridge Williams and Dr. Walter Chipman, President of the American College of Surgeons. These men have been remarkably successful teachers and they themselves stress the fact that there are not sufficient pre-natal clinics or obstetric hospitals in the United States. Dr. Whitridge Williams observes that the medical practitioner "cannot reasonably be expected to give much better service than he is paid for" and in the same paper states that:

> The great bulk of obstetrics in this country will always be done by the general practitioner and the measure of mortality and morbidity of the child-bearing women of the community will be in direct proportion to the sound obstetrics that he practises.
>
> Sooner or later the public will have to make it worth the general practitioner's while to take up obstetrics as his particular "specialty," since there is no branch of medicine which is more vital to the welfare of the community, with the possible exception of pediatrics. But in order to make obstetrics his "specialty" he must not only have had sufficient clinical training in pre-natal, post-natal and normal delivery work in a medical school, but he must also, as the years go on, keep abreast of the new developments in obstetrics by attending short post-graduate courses. Obviously he will not be able to afford these academic excursions unless he receives higher fees for his obstetric work.

Reference.

(1) Douglas Miller and J. R. Whittaker, Jr.: "Anti-Bacterial Potency of the Blood in Pregnancy," *British Medical Journal*, May 18, 1929, page 904.

SOME IDEAS ON THE SURGERY OF UNCOMPLICATED MASTOIDITIS.[1]

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IN aural surgery, as in every other branch of our work, each one of us comes to adopt a certain viewpoint and technique as a result of experience. One man's methods and thoughts may be far removed from those of men whom he sees daily, but whose work he is never privileged to view. It was as much with the idea of learning your attitude towards these everyday problems as to present my own, that I determined to address you on this subject.

This evening then I propose to place briefly before you for your criticism some ideas concerning the various operative measures available for the treatment of mastoidal disease. I have endeavoured to make this paper largely a record of my own experiences and convictions and to avoid text book references and thoughts, so that I shall be surprised if you do not disagree with a lot of what I have to say. The material on which I have drawn, has been provided by the Adelaide Hospital (1924 to 1929), Repatriation Hospital and private practice. The cases number 190 and if I were able to obtain the Adelaide Hospital figures for 1920 to 1924 I have no doubt that the number would be 300 or more, as during that period my work was heaviest. I am well aware that to make this paper of any value it would be necessary to hunt up all these people, examine them, test their hearing and compare their condition with that existing before operation. These notes, however, do not set out to be a statistical report, but merely a record of impressions for your criticism, so that you will understand why I have gone no further into the matter.

Before mentioning the types of operation used it would, I think, be of advantage to deal with one or two generalizations.

First, I think we should regard a mastoid operation as having one prime object—the placing of the patient beyond danger. Unfortunately, unless the patient be literally a sufferer, the thought uppermost in his or her mind will be: "Will my hearing improve?" or "Shall I lose my hearing as a result of the operation?" The idea of anything more serious will not obtrude itself. This is a perfectly understandable attitude to adopt, for we cannot expect a layman to realize the dangers of otorrhœa as we do. Here, incidentally, is room for much good propaganda.

So then we have a second, though admittedly a less important object—the retention or improvement of hearing. This applies chiefly to the cases of chronic otorrhœa. For many years it has appeared to me that the pessimistic attitude of most writers on the subject of hearing after radical and modified radical mastoid operations was entirely unjustified and now my prognosis is invariably this: "What hearing you have you will retain. You may even gain a little, but I have yet to see an uncomplicated case in which operation resulted in a loss of hearing."

> As evidence of this let me mention the case of a man employed in the railways who had chronic mastoiditis with decreasing hearing. He came because he was afraid that he could not pass his next tests. He was operated upon and a radical operation with whole thickness pedicle flap performed. The cavity healed in thirty-one days and his hearing improved sufficiently for him to pass his test.

Given the prognosis—how to fulfil it? By conservatism, but not conservatism in dealing with the mastoid, but with the middle ear and ossicles (having due regard to the existing conditions in each individual case) in accordance with the principles to be mentioned later.

[1] Read at a meeting of the Eye, Ear, Nose and Throat Section of the South Australian Branch of the British Medical Association on May 7, 1929.

The third and in my opinion the least important object in all but acute mastoids, is the obtaining of a dry ear. It applies only to the radical or modified radical operations and must not be regarded as having any reference to the acute forms. Also it must be understood that I do not mean that an ear may discharge pus after operation. That would be tantamount to an admission of failure to remove all the foci of disease. A slight mucous discharge from the Eustachian tube or the middle ear, however, is of no importance from the point of view of either the patient's safety or hearing and cannot be regarded as a stigma on an otherwise successful operation. As you well know, it means that the Eustachian tube is not closed or the middle ear not epidermized. Personally I always attempt to secure closure of the former during the radical operation by the use of fine rasps, whilst the mucosa of the middle ear is gently curetted with a sharp curette in an attempt to remove most of it. The wisdom of this procedure is open to argument and I heard one of the most prominent aurists in Australia admit that he was afraid of it owing to the risk of damage to the windows. However, I cannot recollect having seen any serious results which might be attributed to this measure.

Regarding this question of moisture in the middle ear after radical operations, J. A. Keen in *The Journal of Laryngology and Otology* of March, 1926, draws the conclusion that the patients with moist ears do not hear so well as those with dry. This statement may be so dependent on other factors, such as extent of damage to perceptive elements, duration of disease, hearing before operation *et cetera*, that I cannot see its value. I can, however, say that given an ear with a reasonable degree of hearing before operation, that hearing is no more likely to be impaired in moist than in dry ears; in fact I have frequently thought that, other things being equal, the moist ears gave the better average. I have not gone into figures to prove this—it is merely an impression and subject to the same modifying conditions as were Mr. Keen's deductions.

You will notice from the title of the paper that I propose to deal with operative methods only in straightforward classes without discussing any possible complications. For this purpose I have adopted the following purely arbitrary classification of the types encountered clinically, as it happens to suit the presentation of the points I have to place before you. I have divided the clinical types into: (i) acute, (ii) chronic unilateral, (iii) chronic bilateral, (iv) chronic with acute exacerbation, (v) attic infections (chronic).

Acute Mastoiditis.

I feel that the tendency with most of us is to operate on patients with acute mastoiditis too early. A patient comes to us with a history of pain and discharge from the ear of about a week's duration, the temperature is raised and the mastoid tender, perhaps even a little swollen. A few years ago I used to waste no time in opening up these mastoids, until I began to be struck by the number which showed acute congestion of the bone without pus formation. The result has been a swing towards conservatism and I have been gratified to note that under appropriate treatment, that is, efficient drainage, posture and application of the ice bag, quite a number entirely cleared up. If one does operate at an early stage, I find that the patient is more liable to have a severe reaction with symptoms of septicæmia than if operation be delayed until the acuteness of the process has abated.

I have patients illustrative of both these conditions, that is, resolution after palliative treatment and septicæmia after early operation, under my care at the present time.

Also I am sorry to say that I have one in whom the infection apparently completely resolved, but who soon developed a tempero-sphenoidal lobe abscess which I drained four days ago. This, of course, provides an argument against delay, but one error of judgement would not lead me to abandon my ideas.

These patients may be dealt with by antrotomy or complete mastoidectomy.

Antrotomy.

I doubt whether antrotomy is ever justified except in the case of infants. I have seen so many patients in whom the antrum only was opened without any further search being made for diseased cells, who subsequently went completely to the bad and had to be operated radically, that I have no hesitation in condemning it.

Complete Mastoidectomy.

In complete mastoidectomy with a following up of all infected bone until normal cells are encountered, the methods of dealing with the cavity left are various. The wound may be left open, this being I believe the most widely used procedure. I no longer employ it myself, as I cannot see any advantages over a partial closure, only the lower half of the wound being left open. This method with the exception of the blood clot method combines the most certain with the best cosmetic operation. As an alternative the wound may be closed and the cavity packed through an opening in the posterior meatal wall, the operation then becoming an inferior kind of "Heath." I have never tried this, but have seen the results and was not impressed by them.

On the other hand, the advantages of the blood clot method so greatly outweigh its theoretical disadvantages that I find I am employing it more and more frequently. Success depends on attention to detail in the technique, thorough exenteration of the mastoid cavity and free drainage through the *membrana tympani*. Should the wound break down it can still be no worse than if it had been treated as an open wound *ab initio*. If, as is usually the case, the wound heals by first intention, con-

valescence is cut down from several weeks to about ten days and there are no painful dressings. The filling of the operation cavity with fat *et cetera* I have neither seen nor attempted, so cannot criticize.

Chronic Unilateral Mastoiditis.

There are several ways of dealing with chronic unilateral mastoiditis with central or posterior superior perforation, or with almost entire loss of the membrane.

Complete Radical Operation.

Regarding the complete radical operation I have little to say that is not mentioned *à propos* of other things elsewhere in the paper. One manœuvre which I have found extremely useful and which I recommend to your notice should it be new to you, is one which simplifies the removal of the bridge and robs it of its dangers.

Enter the antrum through a small opening in the bone before knocking away any of the main body of the mastoid. Introduce a heavy curette and with a twisting upward movement of the point, using the posterior margin of the opening in the bone as a fulcrum, cut away the bridge from below upwards. By this means no damage can possibly be done to the facial nerve or the horizontal semicircular canal and the tedious and delicate chiselling and whittling away of the bridge from above is done away with.

Heath's Operation.

Heath's operation may be employed if the membrane be fairly well preserved and the attic uninvolved. I cannot subscribe to the view that Heath's operation is one of very limited applicability. In my opinion it is a most useful conservative method in selected chronic infections, where the object is to improve the hearing rather than retain what remains, and at the same time leave the site of disease open to inspection and observation should recurrence take place.

Removal of the Bridge and Incus but Retention of Drum.

I have performed the operation of removal of the bridge and incus with retention of the drum on three or four occasions when the membrane was in relatively good condition, but there appeared to be much filling in of the middle ear cleft from organized exudate. I have also used it when the incus was involved in the morbid process. The functional results are good and I think that the operation has come to stay.

Chronic Bilateral Mastoiditis.

Chronic bilateral mastoiditis is the type of condition which presents the most awkward problems. One nearly always finds, though, that one ear is referred to by the patient as his "good ear." It worries him but little and "only runs a bit." Very often, however, examination shows that there is little to choose between the ears from the point of view of extent of disease and general appearance. I consider that the correct method of procedure is to operate on the good ear first, performing one of the conservative operations. The reason for this lies in the fact that if the worse ear be operated on first, the other one will not come to operation until the hearing in it is lost. If both ears be irremediably damaged, it may be necessary to do a bilateral radical operation, but I do not think that this has been the case in more than six of my patients. At least I cannot think of more.

There are several methods of dealing with chronic bilateral mastoiditis.

Bilateral Radical Operation.

One operation is the bilateral radical operation. This I have already mentioned.

Heath's Operation.

It is in chronic bilateral mastoiditis that, I think, the Heath operation is chiefly applicable. I have used it extensively both in this and other types of mastoiditis with uniformly satisfactory results. It permits of a conservation of what hearing there is, with the prospect of even a slight gain.

A Modified Radical Operation.

I employ a modified radical operation with removal of the bridge and incus, but retention of the membrane in place of the Heath operation, if I find that the disease has affected the attic to a moderate extent or in the presence of the condition previously mentioned in connexion with removal of the bridge and incus, but with retention of the drum.

Chronic Mastoiditis with Acute Exacerbation.

In chronic mastoiditis with an acute exacerbation if a radical operation be performed, it is well, I think, to have a wide meatal opening to facilitate dressing, more particularly as it is not desirable to leave packing in for any length of time. Heath's operation is very useful in these circumstances, as interference with the vulnerable and inflamed inner wall of the middle ear is not without risk and at the same time good drainage is established. If the inflammation be very acute, operation may be directed only to the immediate relief of the symptoms by the performance of a cortical mastoid operation, the radical being left until later.

Attic Infection.

Anterior Atticotomy.

Anterior atticotomy may be performed in attic infection.

Partial Atticotomy.

Partial atticotomy with removal of bridge and incus if the disease be not very extensive, may be performed.

This would seem to be a convenient place to mention one or two details relating to operations in which a plastic procedure on the canal wall is

carried out. I employ the Ballance flap, but carry the horizontal incision far enough forward to enlarge the meatus, my contention being that the occasional slight disfigurement from this wide exposure is more than compensated for by the subsequent accessibility of the cavity. I do not remove the cartilage from the flap nor cut away any of the redundant tissue behind, as I feel that these structures serve to help in the obliteration of the operation cavity, whilst their presence is no bar to rapid healing.

The wound at the time of operation is firmly packed with bismuth, iodoform and paraffin paste gauze and as this stays in for ten (sometimes twelve) days without being touched, it is unnecessary to stitch the flaps back into position.

I have employed the whole thickness pedicle graft from the hair line behind the ear in about twelve cases, but I do not think that the healing of the cavities treated in this manner was much more rapid than usual. The great disadvantage of this method, I think, is the difficulty of being certain that one is inside the hair-bearing area. I have one patient with a good growth of hair in his ear as a result of this.

Thiersch grafting, I am rather ashamed to admit, I have not tried, in spite of the fact that it has been highly recommended to me.

Following the removal of the initial packing the ear is dried out and dressed daily with "Ambrine," sometimes alternating with red lotion, bismuth, iodoform and paraffin paste or Burrow's solution on gauze strips. "Ambrine" is a wonderful dressing for these wounds, unless there should be a tendency to over-granulation and its use is quite painless which is more than can be said for that of packing.

By these means I succeed in getting the majority of my mastoids with plastic flaps healed in six weeks, though some run on to seven or even eight weeks, with an occasional ten weeks thrown in to humble the spirit. The shortest healing period I have had, was in the case of a huge cavity in which I left the original packing in for ten days and used nothing but "Ambrine" until epidermization was complete twenty-five days from operation. The last two done at the Adelaide Hospital were healed and dry in under five weeks.

Conclusion.

A few ideas have become well rooted in my mind when dealing with mastoiditis. I try:

1. To postpone operation in acute mastoiditis for as long as is consistent with safety.

2. To use the blood clot method in most acute infections.

3. To treat chronic mastoiditis conservatively when operating, unless the drum and ossicles have practically vanished.

4. To leave a fairly large meatal opening in the making of plastic flaps.

5. To use "Ambrine" as a dressing from the time of removal of the packing placed in at operation.

I bring these few points before you as much to learn your ideas as to give you mine. We know but little of the technique of others who work in the same field and discussion I am sure cannot be anything but mutually beneficial.

THE CLINICAL VALUE OF THE SLIT-LAMP TO OPHTHALMOLOGISTS.[1]

By A. L. TOSTEVIN, M.B., B.S. (Adelaide), D.O. (Oxon),
Honorary Clinical Assistant to the Ophthalmic Department, The Adelaide Hospital, Adelaide.

SINCE the introduction of the slit-lamp of Gullstrand and its elaboration by Vogt a new field for the study and observation of pathological, histological and anatomical conditions of the living eye has been presented to the science of ophthalmology.

Structural details, the presence of which we were previously quite unaware, have now been revealed to us. For this alone ophthalmology owes the slit-lamp more than most people at present realize, but we shall not here concern ourselves either with this more scientific value of the slit-lamp or with those pathological conditions of the eye about which the revealing of any new facts has not been of any diagnostic or prognostic importance to the clinician.

Enthusiasts have been inclined to overestimate the clinical value of the slit-lamp, inasmuch as they have found it useful in almost every pathological condition met with in the eye. This has unfortunately prejudiced some against the instrument, with the result that they have not given it a fair trial. It is now becoming more generally recognized that the slit-lamp can be of very great value to the clinician in certain conditions of the eye, if he will take the trouble to acquire the rather difficult technique necessary for its successful application to clinical work.

For the benefit of those who have been disappointed with the result of their labours with the slit-lamp, I should like to mention a few things that, although they may appear trifling, are nevertheless so important that success or failure can depend upon them.

1. The examination room must be sufficiently darkened.

2. The height of the table must be properly adjusted for every patient and the head and chin rest made so that the patient is not only comfortable, but the head must be in a good, square position with the forehead firmly pressed against the headpiece and so it must remain throughout the whole of the examination. The examiner must also be

[1] Read at a meeting of the Eye, Ear, Nose and Throat Section of the South Australian Branch of the British Medical Association on May 7, 1929.

comfortable and seated at the correct height for the examination.

3. The eye pieces of the microscope must be correctly adapted to the interpupillary distance of the examiner, otherwise binocular vision will be difficult or impossible.

4. The beam of light must be correctly focused upon the part to be examined.

It is surprising to find the number of examiners who are not particular enough about having the beam of light correctly focused for the part to be examined. Both the microscope and the light must be in focus for the same object that is being examined, otherwise the examination is a failure. When the beam of light is in focus for the cornea it is quite out of focus for the lens and this focus must also be altered when passing from the anterior to the posterior part of the lens in order to bring out all the layers to be examined. Too much stress cannot be laid upon this part of the technique.

5. The choice of the width of the beam of light is important. The wide beam is correct for a general examination, but a narrow beam must be used for throwing into relief the surfaces of zones of discontinuity for determining the character of minute opacities and for the correct localization in depth of such opacities.

These are among the first things to be considered by the examiner, but because of their simplicity, are very apt to be neglected. If a routine is adopted on these lines from the first, it soon becomes a habit and takes up little time. The slit-lamp should never be used as a short cut to a diagnosis, but employed at the end of the usual routine methods of examination in cases similar to those which we are about to discuss.

Injuries of the Cornea.

We are often confronted with the problem of determining at what depth a foreign body or injury has penetrated the cornea. The usual methods of examination at our disposal often leave us in doubt, due to the fact that hitherto we possessed no accurate method of localizing in depth. As an example:

I saw a patient present himself at Moorfield's Out-patient Department with a history of a foreign body in his right eye. With focal illumination and a + 10 loupe there appeared to be a small, deep, foreign body in the cornea near the limbus at about the five o'clock position. One could not be sure about either its character or depth in the cornea. With the slit-lamp it was found to be a small spot of uveal pigment lying on Descemet's membrane; no foreign body could be detected.

The slit-lamp enables one to determine the depth of small splinters of steel or glass in the cornea and whether or not they have perforated into the anterior chamber. Fine penetrating wounds of the cornea can easily be mistaken for more superficial lesions. This helps one to determine whether an intraocular foreign body is present and is well illustrated by a patient I hope to show you tonight with the following history:

A man, F.A.S., came to us for the first time on January 11 this year. It so happened that while chipping granite on November 3, 1928, he felt a small piece fly into his right eye and he says he went and had it removed, but the last few days he had noticed that the vision in that eye at night was not so good as it used to be. This development, as you see, was about two months after the injury.

On examination the right vision was $^6/_6$ partly, the left vision was $^6/_6$ all. The right eye was white, there being no sign of any ciliary injection and the pupils were equally active. A corneal nebula could be seen just paracentral at about the three o'clock position and it appeared with a + 10 loupe to be fairly deep. The anterior chamber and iris were quite normal. Transmitted light with an undilated pupil showed what appeared to be a perfectly clear lens and the fundus showed no abnormality.

I was almost inclined to say that his slight trouble was due to the nebula, but on looking at the corneal scar with the slit-lamp it was found that the wound had penetrated the cornea obliquely. This, of course, led to a mydriatic at once and an examination of the lens with the slit-lamp showed a small piece of steel or granite sparkling like a diamond situated at about the five o'clock position right out near the equator of the lens. It must have gone in very obliquely when the pupil was fairly well dilated in order to have missed injury to the iris. In addition to this the back of the lens showed the first signs of a traumatic feathery cataract.

Since then we have had him under close observation with the following result. On February 16, 1929, the right vision was down to $^5/_{60}$, traumatic cataract was now well advanced with no sign of any inflammatory trouble. The piece of steel or granite could still be seen, although much less distinctly.

On April 2, 1929, the right vision was such that the patient was able to count fingers at two feet distance.[1]

It will thus be seen that the slit-lamp offers us a quick and reliable means for this discrimination and we are now able to localize with accurate precision. By far the best method for localizing in depth is known as the method of optical section which has been elaborated by Vogt, and I cannot do better than refer you to his description of this method among the abstracts in *The British Journal of Ophthalmology*, Volume VIII, page 117, for March, 1924.

Diseases of the Cornea.

As we all know there are three conditions which give rise to ciliary injection; they are: (i) disease of the cornea, (ii) disease of the iris and ciliary body, (iii) increased intraocular tension. In the early stages of these conditions when the ciliary injection is very slight, it is sometimes difficult to be sure of the underlying cause, but with the slit-lamp at our disposal no case of ciliary injection, however slight, should go away without being diagnosed and treated accordingly.

Superficial Punctate Keratitis.

Superficial punctate keratitis is a fairly common condition which is most prevalent during epidemics of influenza and of catarrh of the respiratory tract. It often starts like an acute conjunctivitis, except that there is no discharge or sticking of the lids. The earliest sign is slight ciliary injection with perhaps some conjunctival redness as well. At this

[1] June 20, 1929: Since the above was written a linear extraction was performed on this patient. The soft cataract came away easily and brought with it the foreign body which proved to be a piece of steel.

stage ordinary focal illumination often reveals an apparently clear cornea, but if looked at with the slit-lamp, minute, sharply defined, opaque dots can be seen in the epithelial layer near the periphery of the cornea. These can be made more evident if a little fluorescin is put into the eye beforehand. Later larger dots can often be seen towards the centre of the cornea, but these show up with the ordinary loupe.

Herpes Febrilis Corneæ.

Herpes febrilis corneæ is a similar and associated condition to the above, but is distinguished by the fact that the dots, instead of being opaque, are clear, transparent vesicles the size of a pin's head.

Inflammation of the Uveal Tract.

Inflammation of the uveal tract comprises iritis, sympathetic ophthalmia *et cetera*.

The diagnosis of iritis in its very early stages is sometimes confounded with conjunctivitis or glaucoma. I suppose most of the cases of acute iritis that we see for the first time, are already in the exudative stages and the diagnosis is not difficult, but there are some cases which come up early and show only some slight ciliary injection with no other obvious clinical signs. It is in these cases of doubt and those suspected of sympathetic ophthalmia that we examine with the slit-lamp for endothelial bedewing and increased aqueous flare.

Endothelial bedewing is a sensitive index of early uveal disease which can be easily recognized. It is best seen by transillumination, the back of the cornea appearing as though it were covered with a fine spray, hence the name "bedewing." Cellular deposits soon become adherent to the little islets of bedewing and then can be seen with an ordinary loupe; they are commonly known as "keratic precipitates." The disappearance of endothelial bedewing in uveal disease is the best indication for the cessation of treatment.

Increased aqueous flare is an early and delicate indication of uveal disease and it is as well to be acquainted with the normal aqueous flare, because the abnormal will then be very easily recognized. An increased flare may be due to a cloudiness in the aqueous in which no cellular elements can be seen, but more commonly the turbidity is produced by cellular elements circulating in the convection currents of the aqueous. In most cases of uveal inflammation the aqueous in the retrolental space is the first to show these cellular elements and, if present, they are not difficult to find. They appear as a fine dust does in a bright beam of light passing through a darkened room.

The importance of these two signs should be readily appreciated when it is realized that they are usually the first signs of early sympathetic ophthalmia at which stage it is generally not too late to enucleate the exciting eye.

Cataract.

The old conception of the lens being composed of nucleus and cortex has undergone considerable modification since the publication of Vogt's work in 1921.

His researches with the slit-lamp revealed the presence of several zones of discontinuity, the number and thickness of which varied with the age of the patient. He has also shown that the classical description of an inverted anterior and posterior erect Y suture in man is wrong and that the reverse of that arrangement is practically constant. This new conception of the anatomy of the lens enables the clinician to make a definite topographical localization of changes in the lens and they have now come to be classified according to the zone which they occupy. For this reason it will not be out of place to mention here that there has been some confusion in regard to the nomenclature of the zones originally classified by Vogt.

Mann, in her recent book, "The Development of the Human Eye," has given each zone a name according to the time of its development and this terminology is now the one most generally used. It is as follows: (i) the central dark interval—embryonic, (ii) the Y suture zone—fœtal, (iii) the next layer—adolescent nucleus, (iv) the cortex—which is adult and senile.

There are three types of cataract occurring in the posterior cortex of the lens which can be distinguished from each other by the slit-lamp before other methods afford the means of differentiation. They are all frequently met with and can be easily confused, but it is very important to distinguish them. They are: (i) *cataracta complicata,* (ii) senile saucer-shaped cataract, (iii) traumatic cataract.

Cataracta Complicata.

The characters of *cataracta complicata* as seen with the slit-lamp are so evident that it can be distinguished from all other types. It often complicates disease of the uveal tract or retina and sometimes glaucoma or high myopia. It arises incipiently and affects the sutures of the lens in its posterior cortex. The opacity spreads out from the posterior pole of the lens in the form of a rosette enveloped in a cloudy haze, but interferes with the vision before anything can be seen with the ophthalmoscope and it is at this stage that its presence can be detected with the slit-lamp.

Normally the zone of specular reflection in the posterior band of the beam in the lens presents a whitish sheen or lustre, but with the onset of *cataracta complicata* a vivid iridescence appears and there is a play of sparkling colours which is called "polychromatic lustre." In the later stages this polychromatic lustre may be overshadowed by little tufts of opacity projecting forwards; these are characteristic and resemble bread crumbs. Later a polychromatic lustre appears at the anterior pole of the lens. It is very unusual not to find some polychromatic lustre even in these late stages of the

condition. It is not difficult to find and is easily recognized when once seen. These cataracts do not lend themselves to operation and the prognosis is not good.

Senile Saucer-Shaped Cataract.

Senile saucer-shaped cataract is a dome-shaped opacity of uniform density, generally accompanied by other senile changes in the equatorial cortex, such as water clefts and lamellar separation; there is never any polychromatic lustre.

Traumatic Cataract.

Traumatic cataract can be caused by simple concussion without rupture of the capsule in which case the prognosis is good or it may be caused by a rupture of the capsule in the region of the equator of the lens or by a single puncture from a fine foreign body.

It is when due to these latter causes that the progress is exceedingly slow and the prognosis poor. There is always a characteristic posterior cortical opacity to be seen, known as a "feathery" cataract because of its resemblance to feathers arranged in the form of a rosette, due to separation of lens fibres at suture lines. It is an extremely thin and delicate opacity with never any sign of polychromatic lustre. It is very important to be able to distinguish these three types of cataract for two reasons: (i) the treatment and prognosis differ with each, (ii) when an injury has been alleged to be the cause of the cataract.

The following case is a good example of the latter.

A labourer, aged fifty-six years, came up complaining of loss of vision in his left eye following a blow on that eye from a piece of falling metal while at his work. He had never noticed that the vision in the eye was defective until after this occurred.

On examination it was found that the right vision was $^{6}/_{6}$ and the left vision $^{6}/_{\infty}$. The low visual acuity in the left eye was found to be due to lens changes. Ordinary examination with transmitted light did not reveal any change in the right lens. Slit-lamp examination showed conclusively that all the changes in the left lens were senile in character and not due to any traumatism. Very early senile changes in the nature of lamellar separation could also be seen in the right lens. As a result of this evidence the man made an unsuccessful claim for compensation.

In conclusion, I think you will agree that, although the use of the slit-lamp is limited, it has a decided clinical value and when once you have become accustomed to using it, it will claim a definite and almost indispensable part of your examination equipment.

AN IMPROVED ARTIFICIAL PNEUMOTHORAX APPARATUS.[1]

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AND

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Honorary Assistant Physician, Sydney Hospital; Honorary Assistant Physician, Clinic for Pulmonary Diseases, Royal North Shore Hospital.

OF the various types of apparatus in use for the induction and maintenance of an artificial pneumothorax the modified Lillingston and Pearson instrument is the one in most common use.

This apparatus, however, has been found to have the following disadvantages:

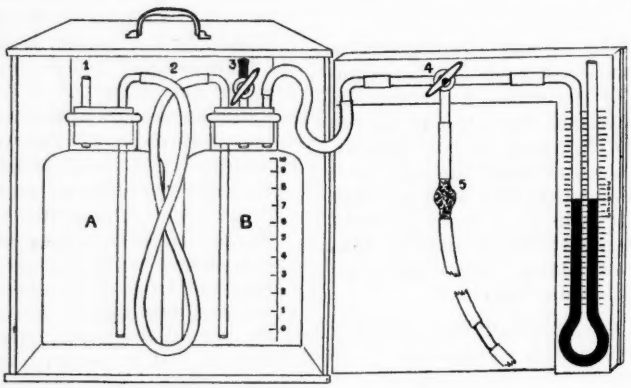
1. The clips soon become worn and are then apt to slip.

2. By using clips a channel is shut off by compressing the walls of the rubber tubing; this in time becomes flattened, even though the clips be moved periodically.

3. It is necessary to use thin walled rubber tubing which is easily compressed; this tubing kinks very readily.

4. There are in all four clips to attend to; the arrangement of the tubing is clumsy and one is apt to overlook one of the clips.

5. Unless every clip is working exactly, leaks will occur.



To overcome these disadvantages and to construct as compact, simple and easily portable apparatus as possible, the modifications shown in the diagram have been devised and as the general principles remain unchanged, a detailed description is not necessary.

The whole apparatus is contained in a box measuring thirty centimetres (twelve inches) high, 22·5 centimetres (nine inches) wide and fifteen centimetres (six inches) deep. The height of the box is dependent on the size of the manometer and could, of course, be increased; this size has, however, been found to be satisfactory.

A glass three-way tap (4) has been used, attached to the door of the box; by means of this tap, any desired communication between bottle B, the manometer and tube (5), leading to the patient, is possible. This tap is the one control and its

[1] The apparatus described herein was demonstrated at a meeting of the New South Wales Branch of the British Medical Association on June 13, 1929.

manipulation is very simple, the wings of the glass cock and a small black dot giving an indication of the direction of the channels. The tap may also be turned in such a way that all communications are closed (as shown in diagram).

To simplify the refilling of bottle B with air, a two-way glass tap (3) has been inserted into the cork, sterile wool packed into the upper tube of the tap acting as an efficient air filter. By means of this tap the refilling is more direct and quicker; tap (4) would, of course, be shut off as shown in the diagram during the procedure.

Pressure rubber tubing is used throughout.

By means of brass spring clips the bottles A and B are kept firmly in the box and while they are easily movable, the box may be carried about without rattling or displacement.

The advantages of this modified apparatus may be summarized as follows:

1. There is a single source of control.
2. Possible leakages are eliminated.
3. Pressure rubber tubing does not kink easily and gives a less fluctuant manometer reading owing to its greater resistance to variations in pressure.
4. The refilling of bottle B with air is quicker and more simple.
5. There is only one loose tube (5) coming out of the box.

This apparatus has been used at the Clinic for Pulmonary Diseases at the Royal North Shore Hospital for the past five months with complete success.

DIET IN HYPERCHLORHYDRIA.

By A. W. J. BULTEAU, M.A., M.B., Ch.M. (Sydney),
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"AN ounce of practice is worth a ton of theory." This aphorism furnishes the *raison d'être* of these few notes which are the result of four years of observation of the effects of various articles of food on myself, as well as on others similarly affected. A correspondent in a recent number of THE MEDICAL JOURNAL OF AUSTRALIA asked for the experiences of one who actually suffers from the distressing condition of hyperchlorhydria. I have done so for eighteen years, although for the past four years the trouble has been kept almost completely in abeyance.

Until four years ago there was a typical history with the usual remissions, then came a climax in the form of a severe melæna which threatened to terminate the scene. Radiographic examination subsequently pointed to duodenal ulceration. As matters were now serious, it was decided to read everything possible regarding gastric and duodenal ulceration in order to try to evolve a cure and then to stay cured. Surgical treatment was not indicated. What, then, of medical treatment and diet? So many divergent views were encountered that it became evident that no particular one could be regarded as fulfilling all requirements. On some points all seemed agreed, for example, the use of alkali in some form or other, although here the danger of alkalosis is becoming increasingly stressed, as is also the ultimate ineffectiveness of the bicarbonate of soda. The value of atropine is pointed out by various authorities. Most systems of treatment seemed to resolve themselves into some modification or other of Sippy's method, with or without atropine.

Now I have had only too many experiences of the pain-food-comfort sequence. It was therefore argued that if the food alone would remove the pain, which the alkali alone will also do, there should be no need to take both together. It was thereupon decided to try the effect of frequent small feeds, without alkali, to be taken in between more ample meals preceded by alkali with atropine. The mixture which has been found most useful is as follows:

Bismuthi carbonatis
Magnesii carbonatis ponderosi ana 2·0 mils (half a drachm)
Calcii carbonatis 0·6 gramme (ten grains)
Tincturæ belladonnæ 0·6 mil (ten minims)
Mucilaginis tragacanthæ quantum sufficit
Aquam Menthæ Piperitæ ad 15·0 mil (half an ounce)

This is taken about ten minutes before the three main meals. For the lighter feeds, milk and biscuits were tried with great success, Arnott's malted milk biscuits proving very suitable, although, no doubt, other plain biscuits or bread and butter would do.

Next the dietary. Here it must be remembered that "one man's meat is another man's poison." People have special idiosyncrasies in food as in other things. At the same time it is safe to assert that the chief things to be avoided by hyperchlorhydriacs are soups, gravies, stews and made-up dishes, corned meats, pastry, pickles, sauces, condiments (except salt), porridge with milk and sugar, acid fruits, tinned foods (except perhaps asparagus), alcohol in any form.

In my own case alcoholic liquor, whether taken with or without food, induced the most deplorable attacks of hyperacidity and in contradistinction to the opinion of some authorities the so-called light wines were found to be the worst of all.

Another matter of importance is the use of tobacco. It was noted that nicotine is held to be an acid-producer by several writers. The workers at the Mayo Clinic definitely ban smoking in all cases of gastric or duodenal ulcer and English writers have commented recently on the increased incidence of duodenal ulcer in women since the fair sex took so keenly to indulgence in cigarettes. Personally it has proved of great value to discontinue smoking.

Having vetoed the use of nicotine and alcohol and having indicated certain articles of diet to avoid, an outline of routine dietary after the acute stage is over is given.

8 a.m.—A little bread and milk or well boiled rice and milk; egg, scrambled, poached or lightly boiled; weak tea or coffee, toast or bread and butter.

10.30 a.m.—Half glass of milk and a few biscuits.

1 p.m.—Fish, sometimes baked, sometimes boiled or fried in a little butter (no batter), bread and butter, cheese or jam, tea.

4 p.m.—Half glass of milk and a few biscuits.

6 p.m.—Fish, as before, with potato (mashed with butter and milk) and other vegetables, preferably mashed, for example, pumpkin, parsnip, carrot, marrow, choko; later, peas and beans, cauliflower, cabbage, spinach. Sweet of milk pudding of any kind, junket and stewed fruit, jelly and cream or custard, blancmange; black coffee.

9.30 p.m.—Glass of milk with biscuits.

This represents the diet to be followed for some weeks at least. In my own case it was adhered to for about twelve months, although variations were gradually introduced. Fish every day becomes very monotonous, but much can be done to overcome that difficulty if some resourcefulness is displayed in preparing it. Oysters may be recommended for lunch. Brains and tripe were gradually added, then a little white meat. Next step was to grilled lamb cutlets, which seem about the best form of meat food for the sufferer from hyperchlorhydria. Roast lamb is well borne. One so rarely gets tender beef that except for a piece of grilled fillet steak occasionally it seems better left alone.

With regard to fruit, the citrus varieties are the worst acid producers. Stewed fruits are quite safe. Apples, bananas, pears and grapes among the raw fruits may be found suitable, but here, as ever, individuals differ. Every individual must test for himself.

Economically the scheme outlined works out well, because it enables a patient to get back to work and yet to carry out treatment effectively. It is a simple matter to carry a "Thermos" flask of hot milk and a packet of biscuits, while the lunch problem is easily resolved by taking sandwiches of egg, jam, oyster or cheese, with tomato, beetroot or banana for variety.

Finally, it is my belief from personal experience as well as from observation of my own patients, that if he knows the way and follows it, practically any hyperchlorhydriac can live comfortably and carry on his usual avocation.

Reports of Cases.

CONGENITAL DUODENAL STENOSIS.

By A. R. BUCHANAN, M.B., B.S. (Melbourne),
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Clinical History.

H.M., FEMALE, aged seven days, was admitted to the Alfred Hospital on March 28, 1929, at 10 p.m. The child was born at a full term, normal confinement, but as soon as she was placed on the breast, she commenced vomiting and had vomited after every feed, sometimes at once, at other times not for about one hour. The vomiting was at times projectile in character, at others only a regurgitation.

There was definite constipation, the bowels had moved only three to four times since birth and only meconium had been passed. On the fourth day the feeding had been changed to boiled cow's milk one part, boiled water two parts and for twenty-four hours before admission she had been given only boiled water, some of which she appeared to retain, but the vomiting did not cease.

On admission the child looked ill and dehydrated. The temperature was 37·1° C. (98·8° F.), the pulse rate 132 and its volume weak. Moulding of the bones of the skull was still present, but no cranial defect or injury could be detected. The heart and lungs were normal. Examination of the abdomen revealed distension in the upper half and on stimulation of the skin peristaltic waves could be seen travelling slowly across the epigastrium from under the left costal margin. The rest of the examination yielded no abnormal finding.

On the history of persistent vomiting occurring in a child of seven days old and occurring from birth, together with the presence of visible peristalsis in the stomach and the passage of only meconium by the bowel, a diagnosis of congenital duodenal stenosis was made, but the child's general condition was so bad that immediate surgical interference was deemed inadvisable.

On admission the child was given 300 cubic centimetres (ten fluid ounces) of normal saline solution intraperitoneally and 0·3 cubic centimetre (five minims) of tincture of belladonna by mouth. She was then fed on sips of saline solution containing 5% glucose as frequently as she would take it. While she appeared to retain a little of this solution, the vomiting continued, the vomitus being dark and offensive. The vomiting occasionally was projectile, but in the main was simply a regurgitation without effort. Her condition did not improve, the pulse gradually weakened and she died next morning at 9.45 a.m.

Post Mortem Findings.

At *post mortem* examination all the organs appeared normal with the exception of the alimentary canal. The stomach and first part of the duodenum were found to be grossly dilated, the pylorus atonic and wider than normal, while the first part of the duodenum formed a large dilatation. At a point just above the ampulla of Vater there was an impassable fibrous stricture of the duodenum (see the accompanying illustration). The gall bladder and bile ducts appeared quite normal. The remainder of the small bowel and the large bowel were very collapsed. The brain was not examined.

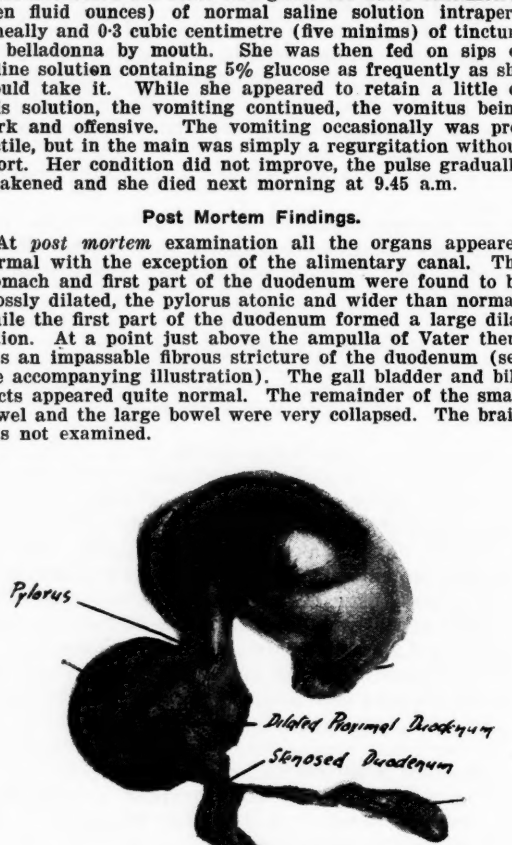

Figure Showing Condition Found on *Post Mortem* Examination.

Comment.

The formation of the duodenum, pancreas and liver in the fœtus all occurs from one section of the alimentary canal, the liver and pancreas forming as buds from the digestive tract. At the same time an intricate vascular supply to each of these is developed from the upper end of the primitive abdominal aorta. Any deviation from the normal in the development of these structures or of their vascular supply may result in a serious maldevelopment of the duodenum. During the fourth and fifth week of intrauterine life the lumen of the duodenum is completely occluded by an epithelial proliferation from its walls; about the twelfth week this should normally be removed and the lumen reconstituted. It is feasible, therefore, to assume that in the case of a maldevelopment of the viscera or of their vascular supply this epithelial proliferation might not absorb at all or might only partially absorb, producing a complete or partial occlusion. An occlusion of this type and an accompanying vascular maldevelopment with secondary necrosis at the point of occlusion may be the ætiological factors in such a case of congenital duodenal occlusion, the degree and length of the obstruction varying according to the degree of anomalous development.

Three varieties may be recognized: (i) Those which present a gap in the continuity of the bowel, (ii) those which show merely a partition in the bowel, (iii) cases in which the lumen is narrowed to a serious extent. This last type may be due to a lesion of the bowel itself or be the result of a fibrous band crossing the bowel or be due to rotatory errors during development.

In a certain percentage of cases other congenital abnormalities are present, such as imperforate anus, other atresias or stenoses occurring anywhere in the gastro-intestinal tract or complete absence of organs. No other anomaly was discovered in the case here reported.

In the differential diagnosis of this condition two other conditions must be considered—congenital pyloric stenosis and obstruction lower down. Vomiting in congenital duodenal stenosis commences either immediately after or within a few days of birth, whereas in the vast majority of cases of pyloric stenosis vomiting is delayed until about the third week after birth. An examination of the vomitus for bile is useful as an aid to diagnosis, but since, according to Garvin,[1] 34% of congenital duodenal stenoses arise proximal to the ampulla of Vater, the absence of bile cannot be held to have much significance; its presence, however, would be of great value. There may or may not be a tumour palpable in either case, but when present, the tumour of a pyloric stenosis is more firm and mobile compared to the softer, more boggy feel of the tumour in duodenal stenosis which is due to the dilated first part of the duodenum. In obstruction lower down the vomiting occurs usually at a longer interval after the ingestion of food. In high obstruction the stomach is usually distended with retraction of the lower abdomen, whereas in obstruction lower down the whole abdomen protrudes and no mass can be felt.

The only treatment which offers any hope at all is surgical, but the condition is seldom diagnosed early enough for successful treatment. As a rule these infants are not brought under observation until after the fourth day when intervention, if theoretically possible, is useless. Operative repair, when possible, takes the form of gastro-enterostomy or duodeno-jejunostomy, but it is rarely possible that any treatment could be curative owing to the fact that the jejunum and remainder of the bowel below is in a condition of what might be termed "embryonic spasticity" which renders it almost non-distensible and thus a functional atresia is superimposed upon the anatomical one.

One writer[2] suggests that whatever operative procedure is adopted, the collapsed intestine distal to the obstruction should be gently inflated with water or air, this probably being the only way to render anastomosis possible and at the same time would demonstrate the presence of other obstructions in the alimentary canal.

Very careful pre-operative and post-operative treatment is essential, as in the case of congenital pyloric stenosis.

The operation is doomed to failure, if it takes more than twenty minutes, because gastro-enterostomy has a high mortality in infants, even when the general condition is good, while in a moribund infant, as these frequently are, it is almost hopeless.

A recent article by De Sanctis and Craig[3] gives a concise survey of the literature on this subject.

Summary.

1. The condition here reported was diagnosed during life as a congenital duodenal stenosis.
2. Owing to the patient's bad general condition, operative interference could not be entertained.
3. Intramural duodenal stenosis was discovered at autopsy at a point just proximal to the ampulla of Vater.

Acknowledgements.

I am much indebted to Dr. F. Kingsley Norris for permission to report this case and to Dr. T. A'B. Travers for the photograph illustrating the macroscopical specimen.

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(1) J. A. Garvin: "Congenital Occlusion of the Duodenum by a Complete Diaphragm," *American Journal of Diseases of Children*, January, 1928, page 108.
(2) H. S. Clogg: "Congenital Intestinal Atresia," *The Lancet*, Volume II, 1904, page 1770.
(3) A. G. De Sanctis and J. D. Craig: "Congenital Duodenal Stenosis and Atresia," *American Journal of Diseases of Children*, April, 1929, page 818.

Reviews.

STRABISMUS.

CLAUD WORTH'S work, "Squint," has reached its sixth edition.[1] Every oculist should own one, for in a simple and concise manner the author discusses the problems arising in the diagnosis and treatment of the various ocular muscle defects. Part of every oculist's duty should be the propagation of various truths concerning the pitfalls of squint. One so often hears from the mother of a squinting child: "The doctor said there was no need to come earlier, because Tommy might grow out of it" or "Polly was too young to wear glasses." It is due largely to Worth's teaching that the parent is now impressed with the fact that the squint itself is of much less importance than the fact that the turned eye will probably lose the sight that has developed, unless correct treatment is instituted. It is because of this neglect that oculists so frequently see adults with one eye reading only $^6/_{36}$ or less. On inquiry, they admit the presence of a convergent squint years before. The economic loss from this cause would be appalling if figures could be produced to show the number of people using only one eye.

> This deterioration from disuse is the more rapid the younger the child, so much so that it is commonly believed that an eye which squints in infancy is necessarily very blind. This is not so . . . A child with good vision in each eye, who develops a constant unilateral squint at the age of six or eight months, will in the absence of proper treatment, become rapidly blind in the squinting eye. This loss of vision in the infant's deviating eye is so rapid that the power of central fixation is often lost within eight or ten weeks. In an eye which begins to squint constantly at the age of eighteen months, the progress of the blindness is rapid, but much less so than in a younger child. At least five or six months usually elapse before the eye loses the power of central fixation.

Then as Worth states, "no infant is too young to wear glasses should they be required."

> Of course, young children sometimes break their glasses, but I have never known a case in which the eye has been injured thereby. The lens, being held

[1] "Squint: Its Causes, Pathology and Treatment," by Claud Worth, F.R.C.S.; Sixth Edition; 1929. London: Baillière, Tindall and Cox. Demy 8vo., pp. 255, with illustrations. Price: 10s. 6d. net.

in the frame, does not break into splinters, but cracks across, or chips at the edge.

Worth stresses the fact that another faculty is lost commonly in early childhood by the ignorant treatment of parents and opticians and the carelessness at times of oculists. This is the loss of the desire for single vision—the fusion faculty. Worth argues that the essential cause of a squint is a defect of the fusion faculty. But in certain cases hypermetropia, if uncorrected, may cause a squint and prevent the development of this faculty. The description of his methods for encouraging this development and the report of the results he has obtained are most stimulating. He limits his description of operative measures to the methods he prefers. Other authors must be consulted for alternative operations. This book is excellently printed, as all text books should be. It is simply illustrated and well bound.

Analytical Department.

CADBURY'S CHOCOLATE.

A FEW years ago the combined firm of Cadbury-Fry-Pascall, Limited, planned an up-to-date factory for the manufacture of chocolates, cocoa and similar products in the south of Tasmania. The organizers expressed their intention during the early stages of adopting every hygienic expedient in the planning and in the conduct of the factory. Several years have elapsed and the factory has been built at Claremont, some eight miles from Hobart. In view of the fact that chocolate prepared under favourable conditions in a cleanly manner from clean milk and good cocoa beans and sugar is a nutritious and healthy food, when taken in reasonable quantities, arrangements were made for our inspector to visit the Claremont factory and to carry out a thorough investigation. Incidentally this visit is of importance in connexion with the development of industrial hygiene.

Our inspector has been much impressed by the manner in which the firm has carried out its programme. He writes that the visit of inspection was not only interesting from a technical point of view, but left a most pleasant impression on his mind. He found that the peace of mind that the old Quaker ancestors of the famous firms enjoyed, had in some mysterious way been imparted to the atmosphere of the modern factory. Honesty, good will, happiness and the freshness of the beautiful Tasmanian sunshine seemed to have been stamped on the faces of the workers as well as of those in charge.

The Factory.

The peninsula in the centre of which the buildings stand, is 246 acres in extent and has a water frontage of about five miles. With the exception of a narrow neck connecting the peninsula with the mainland, it is surrounded by water, the salt water of the River Derwent estuary. The land is overlooked by mountains, the highest of which is Mount Wellington. Our inspector remarks that Nature could not have designed a more beautiful situation. The climate is cool, the air is fresh and uncontaminated by dust and the water supplied from the mountain ranges requires no purification.

The buildings are of reinforced concrete. They comprise six main blocks. Five of the buildings are three storeys high and are connected on the upper storey with one another by arched bridges. There are lifts to the upper floors. All the columns or stanchions are circular; all the corners are rounded. The dressing rooms and lavatories are entirely separate from the manufacturing rooms and the main group has special ventilating shafts. The floor space is approximately 120,000 square feet. There are eight hundred windows. As far as light, ventilation, freedom from dust, ease in cleaning and comfort are concerned, the hygienic conditions of the factory may be described as ideal.

A rigid inspection of all the employees is carried out at regular intervals for evidence of illness and especially of skin affections. All the permanent employees are required to pass a medical examination by the firm's medical officer before being engaged. First aid rooms and rest room are provided. In connexion with this aspect of the firm's undertakings, it may be mentioned that a model village has been established in the grounds. The cottages, of artistic designs, are provided and are controlled on lines similar to those well known to exist at Bourneville. Golf links and a football ground have been placed at the disposal of the resident employees. The whole village is sewered by means of an efficient septic tank system.

The Manufacture.

The chief ingredients used in the manufacture of chocolate are cocoa beans, sugar and milk. The cocoa beans are imported largely from the west coast of Africa and the West Indies, Trinidad and Grenada. The firm imports the beans directly from the grower.

The milk is derived from neighbouring supplies and is received daily. The firm prefers to buy the total output of the dairies with which it deals. It does not own any of the farms, but conducts periodical inspections and supervision. The Agricultural Department of the State of Tasmania is called upon from time to time to improve the breed of the cattle and to test the milk bacteriologically. It is further asked to advise generally on dairy hygiene. No particular breed of cows is preferred, but the milk is tested each day on arrival by the firm's chemist for its fat, protein and carbohydrate contents.

The claim is made that Cadbury's "Dairy Milk Chocolate" contains vitamins *A*, *B* and *D*, natural to milk. Repeated tests in the old country have revealed that the vitamin content is substantially the same in fresh chocolate and in old samples. The vitamin *A* property of the milk chocolate is stated to be approximately one-quarter of that of summer butter. It is further stated that one unit of antirhachitic activity is contained in about three grammes of chocolate. The vitamin *B* content is small. It is stated that the firm's milk chocolate contains at least one-quarter of its weight of milk solids with their full proportion of fats.

Exactly the same process of manufacture has been adopted in Tasmania as in England. The greater amount of sunshine in Tasmania and the possibility of more open air feedings of the cows appear to justify the assumption that the vitamin content of the product is not less in Tasmania than in the old country. In view of the conditions under which the chocolate is manufactured, we have been satisfied to accept this assumption of vitamin content.

Chemical analysis of the chocolate has been carried out by our own analyst and the results are compared with the figures provided by the chemist employed by Cadbury-Fry-Pascall, Limited.

Ingredient.	Firm's Chemist.	Analysis by our Analyst.	
		Sample from Factory.	Bought Example.
	%	%	%
Total fat ..	34·8	33·8	34·4
Milk fat (butter fat)	8·0	7·85	7·95
Water	1·0		
Cane sugar ..		38	38·3
Lactose ..		9·0	9·1
Protein ..		8·5	8·9
Cocoa starch, fibre, etc.		8·75	7·4
Ash		1·95	1·9

The protein is taken as the nitrogen weight multiplied by 6·38.

From the foregoing it may be concluded that Cadbury's "Dairy Milk Chocolate" is manufactured under almost ideal conditions from pure ingredients, that the greatest care is taken to produce a product of uniform composition and that this chocolate may be regarded as pure, wholesome and nutritious.

The Medical Journal of Australia

SATURDAY, NOVEMBER 2, 1929.

An Anomaly.

A COUPLE of months ago the Senate of the University of Sydney advertised in this journal for applicants for the positions of the Bosch Professor of Medicine, the Bosch Professor of Surgery and the Bosch Professor of Bacteriology. A bait was offered to physicians and to surgeons in the endeavour to attract men of experience, of exceptional ability and of originality to give their whole time to the dual tasks of organization and teaching. The salaries offered to the Bosch Professors of Medicine and of Surgery, of £2,500 a year, are reasonable, but by no means excessive. Apart from the fact that a physician of eminence can earn considerably more than this amount in private practice, there is the fundamental consideration that the service required of the Professor of Medicine demands unusual knowledge, great power of organization, a creative genius and facility to raise the standard of learning in his department of the medical school. The objective is to place the teaching of medicine on a level as high as any in the world. The recognition of the important responsibilities carries with it the acknowledgement of the value of the services. The same may be said concerning the chair of surgery. We do not believe that these salaries have been offered solely because it is feared that a man with the essential qualifications would not be prepared to give up his lucrative practice for less. Whole time service, the devotion of the full energies of a competent teacher, a learned practitioner and a trained investigator are worth paying for.

It may therefore be accepted as a sound axiom that those responsible for the moulding of the teaching of medicine and surgery should be paid an annual salary commensurate with the importance of their duties. The Bosch Professor of Bacteriology was offered a salary of £1,100 a year. We are now informed that the salary is to be increased to £1,500. It is difficult to follow the reasoning of the Senate in determining the amount of salary. The Professor of Bacteriology is to be a full time officer. By full time is meant that he must devote all his professional energies to his duties and not undertake any work outside the medical school. His experience must be as great as that of the two other professors. His knowledge and training are not less extensive. His mental endowment will be found to be at least as unusual and added to this his genius for research will be a rarer accomplishment than is the investigational bent of the most eminent clinicians. His responsibilities will be not a whit less onerous, since his will be the duty of shaping the education of the future medical practitioner in the causation and prevention of disease. It is essentially wrong to compare the importance of the teaching of one branch of medical science with another. Each department is necessary and if one is badly planned or indifferently conducted, the whole must suffer. Mr. Bosch has manifested much wisdom in insisting on the recognition of the paramount importance of securing the best physician and surgeon for the two chairs and of offering adequate salaries. It would seem that in the third instance considerations other than those of the value of the work have come into play. It is true that bacteriologists, immunologists and pathologists have been largely altruists who have been content to work for the benefit of mankind with little thought of monetary reward. Few laboratory workers can command a large income in private practice and for this reason the majority has been content to accept a relatively low salary. Many have been so infatuated with their work that they have toiled ceaselessly on a bare living wage. The greater part of the knowledge on which medicine is based, has been gathered by these insufficiently remunerated enthusiasts. The distinction between the salaries offered for the Professors of Medicine and Surgery and for the Professor of Bacteriology is unjustifiable, anomalous and ignoble. We contend that the work is not less important, the qualifications are not less high and the services demanded not less exacting. Surely the same price should be

placed on the services of the third professor as on those of the first two.

It will be noted that the applicants for the three offices are required to send their papers not to the Senate of the University of Sydney, but to a committee in London. We have protested again and again against this irrational procedure. The authorities claim that the committees in London act merely in an advisory capacity. Advisors always exercise a suggestive influence over the persons to whom the advice is tendered. As long as the universities in Australia place the applications in the hands of committees in England, so long will they lay themselves open to the charge of evading their responsibilities and of handicapping the graduates in Australia. It is obviously unfair to ask men thirteen thousand miles away to form an opinion of the capabilities of candidates from written records. If the appointment committees in the universities in Australia have insufficient information concerning applicants in the United Kingdom, those who now serve as members of the so-called advisory committees, could be asked to supplement this information. It may be admitted that some admixture of fresh blood is beneficial to any race, but we claim that the stock produced in our own medical schools is so admirable that every encouragement should be given to it. There is a tendency to hyperconservatism and a retention of old methods that have long since ceased to be acceptable. The advocates of the *status quo ante* must make room for young men with virility, imagination and courage. At times it may be in the interests of the medical profession to invite persons of experience and ability from the old country to fill positions in our medical schools, but this should never be done, if an Australian is available who would be as competent to give the required service. Our medical faculties must be courageous enough to form their own decisions.

Current Comment.

THE LIVER IN PERNICIOUS ANÆMIA.

SINCE the introduction of liver feeding in pernicious anæmia an impetus has been given to the study of the nature of the disease. Observations of a definite character have been made and it has been possible to build up an hypothesis of a deficiency of some essential substance due to action of a causative agent on the liver. This was discussed in these columns on June 30, 1928. The morbid change in the liver most commonly mentioned in text books is the occurrence of hæmosiderosis. This consists in a deposition of iron pigment which is generally more pronounced in the periphery of the lobules. Most observers believe that hæmosiderosis is the result of hæmolysis. Hunter holds that the hæmolysis occurs in the portal area, but McMaster, Rous and Larimore have shown that hæmolysis need not be limited to the portal area. It will be remembered that Minot, Cohn, Murphy and Lawson regarded a setting free of immature cells into the blood stream from the bone marrow as of vital importance. They found it difficult to believe that the prompt improvement following liver feeding was due to the stopping of a hæmolytic process, but at the same time they admitted that there was a dysfunction of hæmoglobin metabolism which might be partly due to cell destruction. Piney states that there is no doubt about the occurrence of hæmolysis. He refers to Naegeli's failure to observe evidence of blood destruction in the peripheral circulation and to the explanation of Peyton Rous that erythrocytes are destroyed inside cells of the reticuloendothelial system. In this connexion it is of interest to consider an investigation by S. R. Mettier into the structural changes in the liver in pernicious anæmia.[1]

Two series of observations have been made by Mettier. In the first series the livers of twenty persons who died of pernicious anæmia during a severe relapse and who had not been subjected to liver treatment, were examined. In the second series there were five livers from persons who had died from intercurrent disease during a remission brought about by liver therapy. In the first series definite enlargement of the Kupffer cells was found in each instance. The increase was due to an abundance of cytoplasm and to swelling of the nucleus so that the cells bulged well out into the lumen of the capillaries. This was characteristic of all the Kupffer cells. Phagocytosis of erythrocytes by the Kupffer cells was found in moderate degree and was recognized by the presence of whole or disintegrating cells within the protoplasm; yellowish brown pigment was present in most of the cells, but particularly those at the outer two-thirds of the lobules. Siderosis was more pronounced in the liver cells and was more noticeable at the periphery of the lobules. Desquamation of the Kupffer cells was seen, but neither this nor the phagocytosis was more excessive than in other severe types of anæmia or in severe infections. In the second series the findings were different. The size of the Kupffer cells was normal, except in a few instances and in these pigment was present. Short details of the illness of each of the patients in this group are given and the conclusion is reached that the return to normal

[1] *Archives of Pathology*, August, 1929.

occurred within the first ten days of remission. The desquamation of Kupffer cells and the phagocytosis of erythrocytes were equivalent in degree to those found during relapse. In the livers obtained during an early stage of remission the siderosis was equal in amount to the siderosis found in a relapse. In two instances in which the patient's blood had been normal at death siderosis of slight degree was present.

The most important finding in this work is the enlargement of the Kupffer cells during relapse and their return to normal size during remission brought about by liver feeding. Obviously the Kupffer cells play an important part in the disease process. It would be most natural to conclude that they have to do with hæmolysis. This would be wrong in view of Mettier's finding that the phagocytosis of erythrocytes and desquamation of Kupffer cells are not more pronounced than in persons dying of an intercurrent infective disease or of some other form of anæmia. Mettier thinks that the phagocytosis of the Kupffer cells may be a terminal event and adds that this is suggested because of Peabody's observations that phagocytosis in the bone marrow is more evident at autopsy than in material obtained at biopsy. If phagocytosis on the part of the Kupffer cells is not more pronounced in pernicious anæmia than in other conditions, it may be concluded that phagocytosis is not the essential activity of these cells in pernicious anæmia. The prompt reduction in size manifested by them justifies the tentative conclusion that they normally supply or at any rate contribute towards the supply of the hypothetical substance which is absent in pernicious anæmia and which is provided in the liver given for treatment. It is quite likely that this is not the whole story. Mettier refers to observations by Castle that while the ingestion of 200 grammes of beef steak has no effect on pernicious anæmia, the anæmia may be promptly alleviated by the daily administration of 200 grammes of beef steak predigested in a normal stomach. This observation, if confirmed, does not necessarily exclude the presence in the Kupffer cells of an essential substance; the Kupffer cells certainly play a part in the normal activity of the liver and the latter influences and is influenced by the hormonal control of digestion. The achlorhydria which is normally present, is another factor and this in turn has a bearing on bacterial activity.

The next point to be considered in Mettier's work is the disappearance of siderosis when the Kupffer cells return to their normal size. The iron pigment unquestionably comes from the erythrocytes. Even Minot, Murphy and their collaborators, previously mentioned, admit that there is a dysfunction of hæmoglobin metabolism which may be accompanied by blood destruction. It must be concluded that when the siderosis disappears, the iron is used in erythrocytopoiesis which is stimulated. In connexion with siderosis attention should be drawn to some comments of Piney. He has pointed out that although the siderosis must be regarded as a result of the breaking down of the erythrocytes, the problem of the disposal of the other constituents of the erythrocytes has to be considered. These cells contain a considerable amount of phospho-lipin and Piney thinks that the liberation of this material is the direct cause of the fatty change found in the liver and in the other organs. The Kupffer cells form an important part of the reticulo-endothelial system and it is probable that these cells and cells of the system in other parts of the body are concerned in the storage of the fatty materials resulting from hæmolysis.

There is one other point in Mettier's work to which attention should be drawn. Piney has stated that the main characteristic of the blood picture in pernicious anæmia is the presence of a variable degree of megalocytosis. He believes that these cells are persistent representatives of certain intravascular cells of the embryonic liver. They normally atrophy before birth and in persons who are affected by pernicious anæmia, this atrophy has not occurred. In other words, pernicious anæmia can occur only in persons who have a remnant of megaloblastic tissue in their livers. Mettier points out that if Piney's views were correct, megaloblastic tissue should be discoverable in pernicious anæmia during remission as well as during relapse. He has not been able to do this. Piney has stated that the megalocytosis is variable. If his view were correct, it would have to be shown that megalocytosis was always present. It would then be necessary to show what relationship megalocytosis bears to other conditions and in this way its bearing on pernicious anæmia might be discovered. In his address to the Section of Pathology and Bacteriology at the third session of the Australasian Medical Congress (British Medical Association) MacCallum pointed out that concentration of attention on the erythrocytes was apt to divert attention from the leucocytes and that this point was of fundamental importance in pernicious anæmia. There can be no doubt that MacCallum is justified in his view that in pernicious anæmia the bone marrow as a whole is affected. It is thus evident that pathological studies should cover the whole of the hæmatopoietic system. Interesting though the work of Mettier is and although it offers scope for justifiable conjecture, this fact must not be forgotten.

PAN-PACIFIC WOMEN'S CONFERENCE.

The second Pan-Pacific Women's Conference will be held in Honolulu from August 9 to August 23, 1930. We are informed that the subjects for discussion will include maternal hygiene, the status of the aboriginal and the alien woman in Australia, the effect of child endowment legislation on the child population, the relation of the cost of living to the dietetic requirements of the individual and the influence of educational systems in Australia on the fitness of individuals for life issues. Dr. Georgina Sweet is the chairwoman of the Australian committee.

Abstracts from Current Medical Literature.

PÆDIATRICS.

Rickets.

L. G. PARSONS (*The Lancet*, September 1, 1928) states that the modern view of rickets is that the disease is a general nutritional or metabolic disorder which affects every system of the body, the early symptoms bearing no direct reference to the skeleton. It may show itself as a respiratory disorder in recurring attacks of bronchitis, as a gastro-intestinal affection in recurring diarrhœa, as a nervous disorder in tetany, convulsions *et cetera*, as a muscular disease in severe hypotonia. Eventually characteristic bone changes always occur. The author recalls the fact that in rickets the zone of cartilage proliferation in the epiphyses is enlarged vertically and laterally, the columnar arrangement is lost and masses of cartilage cells appear in a hyaline matrix. Provisional calcification does not take place, the osteoid tissue is greatly increased and in its deeper part, an irregular deposit of true bone takes place. When healing commences, calcium is deposited in the osteoid tissue and the zone of provisional calcification. In regard to the calcium and phosphorus metabolism the author states that in the normal infant one hundred cubic centimetres of serum contain ten to eleven milligrammes of calcium and five to six milligrammes of phosphorus. In rickets there is a diminution of phosphorus which may fall as low as one milligramme *per centum*, but very rarely any diminution of calcium. In tetany, cœliac and renal rickets, however, a low serum calcium content is found. It is possible to produce rickets in rats by a deficiency either of calcium or phosphorus. These facts tend to show that the ratio of calcium and phosphorus is more important than the actual concentration. For example, in chronic nephritis, phosphorus which should be excreted by the kidneys, is retained, the calcium-phosphorus ratio is altered and a low calcium rickets (renal rickets) is the result. Rickets therefore is a disorder of calcium and phosphorus metabolism resulting from defective absorption and retention of these elements from the intestine and rarely from defective excretion of phosphates.

Dilatation and Hypertrophy of the Hollow Viscera.

F. S. LONGMEAD (*British Journal of Children's Diseases*, January-March, 1929) discusses the idiopathic dilatations and hypertrophies found in childhood affecting the hollow viscera. Since there is no structural block in such conditions as achalasia of the cardia or cardiospasm, Hirschsprung's disease, anal spasm, congenital dilatation and hypertrophy of the bladder or ureters and idiopathic hydronephrosis, it is clear that the disorder must be a neuro-muscular one. Opinions differ as to whether the disorder determines a spasm of circular muscle fibres at the level of obstruction or merely prevents their normal physiological relaxation. The difference, however, is a very small one, being merely in the degree of tone at the constriction zone. Peristaltic movements are controlled by two nerve supplies, the sympathetic and the parasympathetic, the latter promoting detrusor action and relaxing the sphincters and the former contracting the sphincters and relaxing the detrusors. Destructive changes have been found in the parasympathetic ganglia by various investigators in these conditions. This may explain the failure of the circular muscle to dilate at the constriction zone, but it would also lead to weakness of detrusor action, thus failing to explain the hypertrophy above the constriction. There is also much evidence to show that the tone of the muscle at the constriction zone is not normal, but increased, that is to say, it is in a state of spasm. The coexistence of tetany in some of the author's cases, denoting, as it does, calcium deficiency, is interesting and suggests the possibility that a low calcium content in the blood is responsible for the increased excitability of sympathetic nervous tissue. Zondek, however, has made this view untenable by finding that calcium stimulates sympathetic nervous tissue. Congenital pyloric spasm and hypertrophy are given special consideration. Pyloric spasm is obviously analogous to the other conditions, for here there is a zonular constriction without any structural change. Hurst regards hypertrophy as the result of spasm and uses this point as an argument against spasm and in favour of achalasia at the cardia. Most surgeons regard the hypertrophy as a congenital malformation. In any case, it is the spasm which determines the symptoms, and the author favours the view that pyloric spasm and hypertrophic stenosis are different degrees of the same defect, pure spasm being at one end of the scale and stenosis at the other, while between them is every gradation.

Early Pulmonary Tuberculosis in Children.

THE old idea that pulmonary tuberculosis in children is always of the diffuse type has been dispelled by the use of modern diagnostic methods which show that the earliest lesions are localized. A. Delille (*Archivos Espanoles de Pediatria*, January, 1929) records investigations of numerous children either suspected of having or definitely proved to have pulmonary tuberculosis. Under the heading of pathological anatomy he describes four types: (i) caseous nodules with condensation of surrounding tissue, (ii) lobar tuberculosis with bronchopneumonic distribution, (iii) caseous lobar pneumonia, (iv) caseous fusion with cavity formation. Regarding symptoms, the onset is insidious. There is frequently a history of antecedent febrile attacks. These are often regarded as due to enteric fever, paratyphoid fever and less definite conditions without due care being taken in investigating the real cause. Sometimes there is a history of a pneumonia or bronchopneumonia six months previous to the detection of the lesion. The temperature is an uncertain guide. More importance is attachable to a progressive loss in weight. In infants physical examination of the chest by usual methods is often fruitless. It is more definite in older children. Radiological examinations have been proved of very great value. In a series of fifty-five children with an established diagnosis of pulmonary tuberculosis, thirty-two (58%) had localized shadows in the radiographs. In a series of younger children the percentage was even higher. Those with diffuse shadows were suffering from a late stage of the disease; if seen earlier, they would probably have exhibited localized shadows. Apart from patients with the so-called chancre of inoculation, the lesions are usually progressive and fatal unless treated by timely artificial pneumothorax. Certain patients have, however, been observed in whom the condition seemed to advance for a considerable time and then to clear up spontaneously. The author states that in his teachings he has always laid stress on the importance of regarding with suspicion all febrile conditions associated with gastric disturbance which are labelled enteric fever or paratyphoid fever without very clear bacteriological or serological proof. Previous contact with a tuberculous patient is an indication for special care in investigation. Cutaneous and blood reactions do not constitute in themselves proof that pulmonary symptoms are due to Koch's bacillus. Radiographic images have, however, a very high value. The only pathognomonic sign is the demonstration of the bacillus of Koch in the sputum. This is carried out in his clinic by means of gastric lavage. The specimen is obtained in the early morning soon after the child has had its morning cough. The stomach contents are centrifuged and if necessary homogenized and examined in stained films. The chief value of early diagnosis is in connexion with prognosis and treatment. It has also a prophylactic value in that it enables many a juvenile carrier to be detected and prevented from becoming a source of infection to others.

Pyelitis.

R. P. FORBES (*Archives of Pediatrics*, April, 1929) finds that out of 16,367 children admitted to a children's hospital there were 128 with a diagnosis of pyelitis. Forty-one of these, however, did not give sufficient laboratory evidence to justify the diagnosis. Pyelitis is a convenient diagnosis in cases of unexplained fever, especially

as it is frequently a symptomless disease. The finding of a few pus cells during a febrile attack does not warrant a diagnosis of pyelitis, for such findings frequently accompany acute throat infections, especially if the urine be scanty. True pyelitis frequently complicates or follows infections elsewhere. In 29 of the series pyelitis complicated respiratory infections, tonsil infection accounting for seven, otitis for ten, adenitis for three, pneumonia for four, bronchitis for two, sinusitis, stomatitis and influenza for one each. Rheumatism was the primary disease in six instances and other diseases such as ileo-colitis, enteric fever, nephritis *et cetera* in twelve. Eighty-two of the eighty-seven children (94%) with definite pyelitis were girls. The mortality was nil, though four deaths occurred from concurrent infections. Urine culture in 22 of the series revealed *Bacillus coli* in 11, *Bacillus typhosus* in two, *Bacillus paratyphosus* in one, *Streptococcus hæmolyticus* in one, streptothrix in one and no growth in four. Cystoscopy was performed in nine of the series and in most some abnormality was discovered which could not have been discovered without the help of the cystoscope. Helmholz recently found that 56 out of 94 patients suffering from pyelitis, showed some abnormality in the urinary tract. Two sterile urine cultures should be obtained before discharge to insure a bacteriological cure.

ORTHOPÆDIC SURGERY.

Fractures of the Spine.

ARTHUR G. DAVIS (*Journal of Bone and Joint Surgery*, January, 1929) cites many examples of compression fractures of the spine and refers to an extensive literature. He advocates the reduction of fresh compression fractures by hyperextension followed by adequate splinting in a bivalved plaster cast and gives full details of his method.

Arthroplasty of the Knee.

FRED H. ALBEE (*Surgery, Gynecology and Obstetrics*, September, 1928) describes his method of performing arthroplasty on the knee, the essential features of which are a U-shaped incision extending down to the attachments of the *ligamentum patellæ* to the tibia, a dove-tailed mortice of bone being removed with the *ligamentum patellæ*, the knee joint being opened freely, the patella turned upwards and the gliding mechanism of the extensor tendon being preserved. The femur is cut in the shape of a wedge with an angle of about 120° and this surface fits closely into a corresponding surface on the upper end of the tibia. The upper surface of the femur is rounded off to allow full movement. This arrangement obviates a great deal of lateral mobility. Fat and fascia transplants are used to prevent adhesion of the raw surfaces, a plaster case is applied and continuous traction and early movement are the essentials of after treatment. The traction is continued for at least one and a half months after the plaster is removed. Weight-bearing is not permitted until at least two months after the operation. He cites twenty-four arthroplasty operations on bony ankylosed knees of tuberculous origin and concurs with the opinion of Payr and Baer that healed tuberculous joints properly selected are favourable for arthroplasty.

An Operation for Fusion of the Lumbo-Sacral and Both Sacro-Iliac Articulations.

FREMONT A. CHANDLER (*Surgery, Gynecology and Obstetrics*, April, 1929) describes the operative technique for fusion of the lumbo-sacral and both sacro-iliac articulations. As far as the lumbo-sacral articulation is concerned the operation is similar to the orthodox Hibbs's fusion. Through the same incision he splits the iliac crest upwards from the posterior superior iliac spine to a point corresponding to the upper limit of the sacro-iliac articulation. The inner plate of bone is removed by dividing portion of the ilio-sacral ligament and the cartilage is curetted from the articular surface of the sacrum. The gap is filled with chips of bone and portion of the crest of the ilium is used to reinforce the fusion about the lumbo-sacral articulation. He reports very satisfactory results in five cases.

Luxation of the Costo-Vertebral Joints.

STEELE F. STEWART AND J. W. WARREN (*Journal of the American Medical Association*, February 23, 1929) describe a dislocation of the first costo-vertebral articulation which was reduced through an oblique incision made across the neck above the clavicle. After dissection between the brachial plexus and the subclavian artery a heavy hook was put round the rib which was then drawn upwards and outwards and returned to its normal relationship with a loud snap. Subsequent X ray examination showed that restitution of the rib to its normal location had occurred. The authors review the literature extending over nearly two centuries.

Heterotopic Ossification and Myositis Ossificans Progressiva.

BEDRICH FREJKA (*Journal of Bone and Joint Surgery*, January, 1929) describes the pathology of heterotopic ossification and *myositis ossificans progressiva*. He quotes Leriche's experiments on new bone formation and states that the latter depends on two conditions: (i) Embryonic tissue with well developed intercellular substance and tender fibrils, (ii) a local increased amount of lime salts. This embryonic tissue is more favourable for ossification than a more fibrous tissue. He presents notes of a case of *myositis ossificans progressiva* which bears out these views. X ray pictures in this instance revealed a small hypophyseal fossa. The condition usually developes after infectious diseases, trauma or transverse lesions of the spinal cord, all of which he considers are only contributing factors with the dystrophic constitution which possibly depends on a disorder of the endocrine glands.

Pneumococcus Spondylitis.

HENRY MILCH AND PAUL W. LAPIDUS (*Journal of Bone and Joint Surgery*, April, 1929) state that from one-tenth to seven-tenths of all patients with pneumonia have arthritis as a complication. The knee, shoulder and wrist are the joints most frequently affected, although affections of all joints of the extremities have been reported in the literature. Definite bacteriological proof is difficult to obtain. In the vertebral column the X ray changes are those characteristic of chronic osteomyelitis in which rarefaction and new bone production are both present. Clinically the patients present all the criteria of Pott's disease, but bacteriological examination of aspirated pus reveals the presence of pneumococci. Cofield has shown that "bone-bridging," previously considered evidence of the non-tuberculous nature of spondylitis, may be seen not only in mixed tuberculous lesions, but even in uncomplicated pure tuberculosis.

Foreign Bodies in Joints.

P. MOULONGUET (*Journal of Bone and Joint Surgery*, April, 1929) discusses the pathology and ætiology of foreign bodies in joints. He classifies them as osteophytes detached from the epiphysis, foreign bodies developed about the articular surfaces and foreign bodies of synovial origin or arthrophytes. The latter are more frequent in *arthritis deformans* and in the nerve arthropathies. Foreign bodies resulting from trauma are probably of bony origin, although their authenticity has been questioned. The postoperative prognosis of these foreign bodies in joints is good, the only exception being cases in which pathological joint lesions are prominent.

Elbow Dislocation and Ulnar Nerve Injury.

F. J. COTTEN (*Journal of Bone and Joint Surgery*, April, 1929) describes the nerve injuries frequently associated with dislocation of the elbow and cites several instances in which the fibrous tissue attached to a displaced medial epicondyle was responsible for definite pressure on the ulnar nerve. He emphasizes the fact that in no one case had there been gross damage of the nerve and that the essential part of treatment consists in freeing the nerve from tension.

British Medical Association News.

SCIENTIFIC.

A MEETING OF THE QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the B.M.A. Building, Adelaide Street, Brisbane, on August 2, 1929, DR. S. F. McDONALD, the President-Elect, in the chair.

Deafness in General Practice.

DR. ARTHUR MURPHY read a paper entitled: "Deafness in General Practice" (see page 626).

DR. R. GRAHAM BROWN said that he had very great pleasure indeed in opening the discussion on Dr. Arthur Murphy's paper. It was concise and full of just the sort of information which the general practitioner required. It was one of the best he had listened to. He regretted that Dr. Murphy had not made the subject of his paper cover a wider field, because what had been given was so excellently presented, that he felt he could have listened with pleasure to quite a lot more. He supported Dr. Murphy very strongly in emphasizing the unhappy lot of most deaf people. It was their duty to concern themselves even more than they were doing with the prevention of the development of this unfortunate condition. To illustrate his point he gave details of a particular case and pointed out that if in the early stages ear treatment had been carried out, the individual would have been saved a great deal of discomfort and loss of hearing. The history mentioned also showed how even when the patient had later reached adult years, attention to the causative condition about the nose and naso-pharynx had resulted not only in retention of the hearing then present, but also in a very definite improvement. He considered that the question of deafness was one of great national concern and, referring back to the days of the war, he thought of the considerable number of men who were put into the lower grades of the army because of deafness. He emphasized particularly the question of nose blowing; he maintained that frequently middle ear infection could be traced to this. In these circumstances there was a definite symptom of "cracking in the ear" following this act. Dr. Graham Brown said that several papers had been written on the question of "the curse of the handkerchief" and he felt that patients should be given the instruction, "don't blow your nose!" Forcible nasal douching should likewise be avoided. He said that this referred not only to patients who were suffering from acute naso-pharyngeal infections when the question of an acute middle ear suppuration was always possible, but also to the type of chronic naso-pharyngeal "catarrhal" condition, when the bad habit of nose blowing, he considered, had a decided bearing on the development of "catarrhal" deafness. Dr. Graham Brown said that he would like to add that the presence of diseased adenoid tissue in the naso-pharynx should be recognized as early as possible. He said that first of all some antiseptic solution could be "squirted" up the nose from an eye-dropper, with the patient lying on his back, and he was rather partial to a half strength "Eusol" solution and, as suggested by Dr. Murphy, argyrol drops. He pointed out, however, that this palliative treatment should not be persisted in if there was no definite improvement in the symptoms. He considered that one could not harp too much upon the fact that it was important to remove these adenoids as early as possible when no improvement took place after treatment by antiseptic solutions *et cetera*, for the presence of these tissues had a direct bearing not only upon the occurrence of the acutely inflamed middle ear, but also on the chronically inflamed ear, as Dr. Murphy had pointed out. He made reference to a case in which he had had to remove adenoids a few days after birth, so as to allow the little patient to suckle. He said that he had recently had an infant of under six weeks with extensive mastoid and post-auricular abscess. In treating the acutely inflamed middle ear, there was a drug on the market which was of great value in relieving pain, particularly in the early stages, which went by the name of "Otalgen." A chemist in the city had made a preparation according to his instructions which went by the name of "Otitol" and which was equally as efficacious as "Otalgen." As regards incision of the drum, he said that there should be no hesitation about the adoption of this procedure, but that there were times when it was impossible to persuade the parents to allow of this being done to their child. He referred to an argument which was frequently put up by the parents and friends: "If you incise the drum, you will interfere with hearing and there will be a permanent perforation of the drum head." He said that if the matter was considered, it would be realized that the surface of a bulging tympanic membrane was far greater than that of a normal drum, so that when an incision was made, there was a tendency to overlapping of the edges and what actually happened was that the incision tended to close quicker than was desired. Sometimes it was necessary to reopen the incision and he said that when this was done, it was advisable on the second occasion to make another incision, so as to form the outline in a "V" shape. This prevented rapid closing of the perforation. When they considered the disability under which deaf people had to carry on, the prevention of "catarrhal" deafness which became evident in later life, was almost more important than was the case in regard to acute middle ear suppuration. The term "catarrhal" deafness was being eliminated by otologists and he was sorry to see it, for he considered it a good term to use for most of the deafness developing later in life. When once deafness was established, little could be done to bring back the hearing, although much could be done to prevent the condition advancing still further.

He said that the subject matter of the paper was naturally limited and was not intended for a detailed discussion by otologists. Therefore, it would be inadvisable to go into minute details concerning certain points. He would like to thank Dr. Murphy very much for choosing such a subject and also for presenting it in such an excellent way. He felt that such a paper would be of considerable value to the general practitioner and also that, if the principles laid down in it were carried out universally, a great deal would be done towards the prevention of deafness.

DR. LOCKHART GIBSON felt slightly diffident in talking about anything but eyes; he still treated middle ear infections, but referred all other ear conditions. He had treated so many that he had come to certain conclusions about them and their importance. He had noticed of late that something he thought essential was not being attended to as it should be. He meant Politzerization. He had not seen a patient in time to incise the drum membrane himself, a patient who had developed a mastoiditis afterwards nor had he seen one in whom the hearing was not fully restored. He followed incision up by immediate daily Politzerization.

In children the drum membrane ruptured so quickly sometimes that an opportunity to puncture it might not be presented, but one should try to anticipate its rupture as Dr. Murphy and Dr. Brown had said. He had never known an incised wound of the drum membrane not to heal. He still treated middle ears because he believed he prevented many mastoids from subsequently requiring operation, namely, by thorough and daily Politzerization while any discharge persisted and in order to obtain good drainage of middle ear and antrum. Politzerization emptied not only the middle ear, but the antrum also, because the antrum was aspirated by each inflation. Such treatment was successful also in some chronic cases. He thought he could claim to be the first in Brisbane to remove adenoids. He entirely agreed as to the importance of removing adenoids very early, even in a child of a few weeks old and sometimes this could be done with the finger. An infant, previously unable to take the breast, became able to do so. He had listened with great interest to Dr. Murphy's paper.

DR. WALTER CROSSE thanked Dr. Murphy for his excellent paper and said he could have listened to a lot more. When at the Children's Hospital years previously, Dr. Crosse had been astounded at the very few patients with middle ear infection who had had their tonsils and adenoids properly removed. This had been among a very large number of patients. He felt that although they

were always talking about adenoids, they had still to keep talking, as a lot of men did not realize the importance of adenoids. It was found that intermittent deafness in children was nearly always due to adenoids.

Dr. Crosse mentioned an instance of mastoid antrum infection or antritis that had occurred in a child one week old in the Hospital for Sick Children.

With regard to the wick treatment, he would like to know if it were used in Vienna. He always used a plain sterile wick after a myringotomy till the ear was dry. Had Dr. Murphy had any experience of "Mucidan"? Dr. Crosse's experience had been favourable with this drug in patients with mucoid discharge.

Dr. Crosse thought there was a lot to be learned from Dr. Murphy's paper and thought that a lot of deafness could be prevented if practitioners would only carry out what he had set forth.

DR. ERNEST CULPIN wished to add his small share of praise for Dr. Murphy's paper. When he had first read the title he had wondered what it would be like, but he considered it an excellent paper.

He related the history of one patient seen some years previously at the Hospital for Sick Children. This history had impressed on him the necessity of removing adenoids after puncture of the drum. A young child, very ill after general peritonitis and appendicectomy, had developed an acute *otitis media* with definite redness, tenderness and swelling over the mastoid. Ethyl chloride had been administered whilst the patient was in bed, the drum incised and a very large mass of adenoids removed. The inflammation had rapidly subsided and the ear had returned to normal.

Dr. Culpin also mentioned an instance of congenital adenoids seen in a clinic in London. With regard to Politzerization, he recognized that it was an essential form of treatment, but sometimes difficulty arose. Should those patients be subjected to Politzerization in which there was a quantity of mucus present in the nose, if blowing the nose was apt to cause *otitis media*? A Eustachian catheter could be used and sometimes he considered this preferable. Dr. Culpin said he used carbolic and ichthyol and glycerin drops in the ear; the ear was kept filled up with the drops, but it had to be cleansed by syringing once in twenty-four hours, otherwise the ichthyol was deposited on the drum and obscured the vision.

The question was often asked as to why adenoids were so common and why allied conditions such as asthma occurred. He quoted a case of a parasitic twin and said he thought that to a great extent the explanation lay in the present day artificial condition of living. It was a matter for philosophical study. Prophylaxis of deafness went further back than diseases of childhood, to health and habits of parents.

DR. A. C. F. HALFORD said he had been very interested in the subject matter of the paper. Dr. Murphy had expressed his views very concisely and had given a very great deal of material in a short space of time. He had dealt with a question of the greatest importance to the race. Dr. Halford considered it most pathetic to see people approaching middle age and becoming deaf.

Dr. Halford mentioned the deafness of children which was not noticed by the teacher. The child heard what was said to him, but did not hear what was said to the class and these children were considered dull. He quite agreed with Dr. Murphy's arguments in regard to the first five years of life. Holt's statement that there was no more promising field in medicine than the prevention of disease in childhood, was most true and important. If preventive medicine were effectively applied in the first five years of life, there would be little need for it later. Many young practitioners considered that anything relating to a specialty was beyond them, but he did not consider any general practitioner was worthy of the name who could not recognize an acutely inflamed middle ear. Like the throat, the condition of the ears should never be overlooked in any case of illness in children.

Dr. Halford considered more damage arose from secondary infection than was usually thought and he thought that aseptic plugging was very unsuitable. He used soft bismuth, iodoform and paraffin paste himself and applied an antiseptic pad at night time to catch the discharge. Dr. Gibson's insistence on daily Politzerization probably prevented secondary infection, as it kept the stream of pus moving towards the outer part.

DR. E. S. MEYERS congratulated Dr. Murphy on his paper. At that meeting there had been greater unanimity as to the procedures to be followed than he had heard before.

Dr. Meyers thought Dr. Murphy had paid more attention to the patient than to the operator. It would be interesting to know how ear specialists had got on in their first years of general practice. At the meeting there were very few general practitioners and probably a great number of patients were being treated at that time by general practitioners not present.

What were the activities of the Ear, Nose and Throat Section in regard to the prevention of deafness? He himself had never seen a child's ear drum while a student. The young general practitioner looked on these patients with fear and trembling. The ear, nose and throat specialists were doing most of their work in luxurious surroundings, while the general practitioner was working in the worst conditions—a screaming child, a frightened mother, the house upset *et cetera*. He considered that more help could be given to the general practitioner at the post-graduate courses.

DR. A. J. MACDONALD added his thanks for Dr. Murphy's paper. Deafness was important, both to the general practitioner and to the specialist. He agreed with Dr. Brown as to the removal of adenoids and tonsils very often curing temporary deafness. With regard to the removal of wax from the ear, every general practitioner had seen patients in whom this was necessary, and general practitioners should be able with ordinary care to remove wax by first applying an oily solution when the wax would come away very easily.

DR. S. F. MCDONALD said that he had enjoyed Dr. Murphy's paper very much and that he found it full of good substance and of intense practical application to the man who was doing ordinary everyday work, the man who could see the patients in an early stage.

Dr. McDonald stressed the point that the mere removal of tonsils and adenoids in children suffering from the exudative diathesis, did not entirely cure the child; it benefited them, but general treatment was also very necessary. The recognition of *otitis media* was a matter for the general practitioner and it was remarkable how rarely it was recognized. If auroscopes were more freely used, more children would escape these perils and trials. *Otitis media* was one of the most frequent causes of obscure fever and sleeplessness in children. Dr. McDonald mentioned the improvement in swallowing in selected cases after removal of tonsils and adenoids which had to be done thoroughly and entirely.

MEDICO-POLITICAL.

ANNUAL MEETING OF THE DELEGATES OF THE AFFILIATED LOCAL ASSOCIATIONS OF MEMBERS WITH THE COUNCIL OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE ANNUAL MEETING OF THE DELEGATES OF THE AFFILIATED ASSOCIATIONS AFFILIATED WITH THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION WITH THE COUNCIL OF THE BRANCH was held at 21, Elizabeth Street, Sydney, on August 30, 1929, DR. F. BROWN CRAIG, the President, in the chair.

The following delegates were present: Dr. E. P. Blashki (Warringah District Medical Association), Dr. K. S. Macarthur Brown (Central Western Medical Association), Dr. A. G. Brydon (Northern Districts Medical Association), Dr. G. A. Buchanan (Central Southern Medical Association), Dr. L. Cowlishaw (Kuring-gai District Medical Association), Dr. O. A. Diethelm (North-eastern Medical Association), Dr. S. R. Dawes (Western Medical Association), Dr. A. M. Gledden (City Medical Associa-

tion), Dr. H. Hunter (Eastern Suburbs Medical Association), Dr. C. P. Jackson (South-eastern Medical Association), Dr. N. J. Mackay (South Sydney Medical Association), Dr. A. W. Mobbs (Balmain District Medical Association), Dr. A. Muscio (Eastern District Medical Association), Dr. A. T. Roberts (Central Northern Medical Association), Dr. W. F. Simmons (Illawarra Suburbs Medical Association) and Dr. R. W. W. Walsh (Western Suburbs Medical Association).

Friendly Society Lodge Practice.

DR. H. HUNTER, on behalf of the Eastern Suburbs Medical Association, moved that the Common Form of Agreement be revised with a view to an increase in the confinement fee by one guinea. In support of the motion he referred to the increasing difficulty of modern obstetrical work and to the amount of time that had to be devoted to this work both in connexion with antenatal care and in the conduct of the labour and the puerperium. He pointed out that the same fee was paid for normal labour as was paid for abnormal labour. He did not think that the lodge members would raise any objection to the increase of fee when they realized that this increase would entitle them to more attendance. The motion was seconded by Dr. Blashki.

DR. F. W. SIMMONS stated that the district in which he practised, was an industrial district and the financial depression was making itself felt throughout the whole population. While he approved of more adequate remuneration for modern obstetric work, he considered that the present was an inopportune time to ask for higher fees and he would therefore oppose the motion.

DR. C. P. JACKSON agreed with Dr. Simmons.

After other members had spoken, the motion was put to the meeting and was lost.

DR. H. HUNTER moved:

> That the rate for attendance on lodge patients within the metropolitan area be increased from twenty-six to thirty-six shillings *per annum*.

Dr. Hunter pointed out that this motion was not a new one. It had been brought up twelve months previously. He claimed that the industrial depression and bad times would not last for ever and that the work was worth at least two pounds. Moreover, he did not think the lodge members would find it hard to pay thirty-six shillings a year for their medical attendance. He was satisfied that the lodges were expecting them to ask for an increased rate and he claimed that the increase mentioned in his motion was a fair one. The motion was seconded by Dr. W. F. Simmons.

In support of the motion Dr. A. W. Mobbs said that he was satisfied that lodge members would not feel an extra two pence a week. He was sure that the friendly societies had long been expecting a request of this kind.

DR. A. MUSCIO anticipated that if the motion were carried, there would follow a long period of negotiation. Notwithstanding this, he held that the increase should be introduced. The work of the lodge medical officer had become much more arduous and he was expected to have a much fuller knowledge of all branches of medicine than formerly. The lodge patient had the right to biochemical, radiological and other special examinations and it was absurd to expect the medical officers to provide these without extra remuneration.

DR. K. S. MACARTHUR BROWN did not approve of any approach to the Friendly Societies' Association by the Branch. He considered that it would be a mistake to alter the Common Form of Agreement which was working most satisfactorily. The remedy lay in the hands of the medical officers. If they enforced the income limit clause, there would be no justification for the proposed alteration. He advocated that medical officers should be stricter in their insistence on the exclusion of all friendly society members whose income exceeded the permitted limit.

Several delegates supported the motion, while others disapproved on the ground that the time was inopportune. The motion on being put to the meeting was declared carried.

DR. H. HUNTER also moved on behalf of the Eastern Suburbs Medical Association:

> That the secretaries of lodges be requested to furnish during the first week of January in each year a complete list of members with addresses, all alterations to be supplied quarterly, also with addresses.

Dr. Hunter pointed out that the lodge secretaries usually supplied a list of additional names that were being put on to the medical officer's list. The complete list was rarely supplied and addresses were not given. Dr. Hunter thought that if a complete list was supplied once a year and the medical officer were notified of all additions each quarter, the work would be rendered easier. He held that it was essential for identification purposes that the full names and addresses of lodge members should be supplied.

The motion was seconded by Dr. Brydon.

Several delegates supported the suggestion particularly because the lodge secretaries rarely supplied full lists and never indicated the members' addresses. The motion was carried.

DR. G. A. BUCHANAN, on behalf of the Central Southern Medical Association, moved:

> That Clause 13 of the Common Form of Agreement be more clearly defined in respect of the right or otherwise of a medical officer of a lodge to charge a special fee where the lodge patient desires further opinion.

He stated that his association asked for a clear interpretation of the clause. It appeared that if the medical officer met another medical practitioner in consultation, he was not entitled to a fee. If a patient asked for the consultation, he thought that the medical officer should be entitled to charge a fee. It was quite possible that the patient or his relatives might ask for a large number of consultations and that the medical officer would thus be required to give a large amount of time to these consultations without any recompense. The motion was seconded by Dr. Cowlishaw.

DR. H. HUNTER agreed with Dr. Buchanan that a fee should be paid if the consultation took place at the request of the patient. He thought that Clause 13 was quite definite. On the other hand he suggested that the consultation might be regarded as a special service and that a fee could be charged in accordance with the provisions of Clause 16. He moved as an amendment that Clause 13 be amended to give the medical officer the right to charge a special fee when the patient desired a further opinion.

The amendment was seconded by Dr. A. W. Mobbs who pointed out that consultations usually entailed the giving up of a whole hour. Lodge patients frequently recognized the justice of the claim and paid their medical officer a guinea fee. He thought that they should have a right to charge.

Some discussion followed, in the course of which it was pointed out that Clause 13 was quite clear and unambiguous. The amendment did not find favour with the delegates and Dr. Buchanan failed to obtain sufficient support for his motion.

Hospital Practices.

DR. S. R. DAWES moved on behalf of the Western Medical Association:

> That the question of medical fees being charged to patients in midwifery wards of public hospitals be discussed and that it be recommended to the Hospital Commission that the ordinary private fees be charged to such patients.

He assumed that, if carried, this recommendation would be placed in the hands of the Hospitals Committee of the Branch.

DR. W. F. SIMMONS, in seconding the motion, pointed out that it was a very large question and needed much consideration before definite opinions were adopted. He approved of the contention that midwifery patients in public hospitals should be attended for ordinary private fees. It was obviously in the interests of women to be

confined in properly equipped institutions. It would be unfair to the private practitioner to deprive him of remuneration for this work when he recommended his patient in her own interest to enter a hospital.

DR. BROWN CRAIG said that Mr. Love, the Commissioner for Hospitals, had not yet proceeded far in determining the details of the scheme on which the Hospitals Commission was working. Dr. Craig suggested that the recommendation could be sent to the Hospitals Committee so that this committee might endeavour to work the idea into the proposals that would be made by the Council and submitted to the Commission when the latter body consulted the Council on its programme.

DR. A. MUSCIO referred to the modern policy of establishing midwifery wards in as many country hospitals as possible. The medical profession should make it quite clear that fees must be paid for this class of work. No one else was required to do gratuitous work for a large section of the community. It was pointed out that Mr. Love was in favour of allowing the medical profession to obtain reasonable remuneration for work done. In the majority of private hospitals the patients paid according to their means and it was not proposed to interfere with these hospitals, provided that they were carrying out the work suitably and well. The provision of accommodation for women in child-birth in new institutions would depend on the amount of existing accommodation and on their suitability. Mr. Love had already laid down the general principles on which the Hospitals Commission would work.

DR. A. J. GIBSON thought that if the motion were passed without amendment, difficulties might arise. He referred to the conditions obtaining in hospitals like the Royal North Shore Hospital and suggested that the members of the honorary staff could not accept fees under their present terms of appointment. It was necessary also to consider the position of the patient who could not afford to pay. It might be very detrimental to the interests of the hospital if the honorary medical officers found it to their advantage to persuade patients to leave one hospital and to enter another.

DR. G. A. BUCHANAN thought that all new maternity wards should be placed in separate units and that special regulations should be framed to cover these units. He suggested further that the honorary medical officers to public hospitals should not be required to take on duty in the midwifery wards and that practice in these wards should be controlled by private arrangements between the patients and the medical practitioner in charge.

DR. A. W. MOBBS said that he welcomed the establishment of midwifery wards, but he wanted payment for obstetrical work. He thought that some arrangement might be made to provide for indigent patients.

Several other delegates spoke on the motion. The majority approved of the principle and carried the motion with the addition in the second part of the words "through the Hospital Committee."

Department of Repatriation.

DR. A. J. BRYDON, on behalf of the Northern District Medical Association, called attention to the scale of fees fixed by the Department of Repatriation with the concurrence of the Federal Committee for medical attendance on discharged soldiers. In 1919 the Branches had considered a document known as Circular L, in which were set out the fees payable to medical practitioners for the treatment of discharged soldiers. These fees were as follows: For the first consultation, examination and treatment, ten shillings, for the next three consultations seven shillings and sixpence each and for subsequent consultations five shillings, provided that the patient visited the medical practitioner's surgery. When the medical practitioner saw the patient at his own home or elsewhere, the fee for the first two visits was ten shillings, for the next four visits seven shillings and sixpence and for subsequent visits five shillings. Mileage at the rate of five shillings per mile beyond three miles from the medical practitioner's surgery was granted. Dr. Brydon moved:

> That the schedule of fees paid to medical officers by the Department of Repatriation be forthwith revised.

At first there had been a considerable amount of work. In recent years the patients requiring attendance were suffering almost exclusively from chronic conditions which entailed a considerable amount of trouble. He thought that it would be less time-robbing and less difficult to carry out a life insurance examination than to attend to these soldier patients and report to the Department. The minimum fee for the life insurance work was one guinea. He thought that the fee paid by the Department of Repatriation was quite inadequate and that they should address their protest to the Department.

DR. L. COWLISHAW seconded the motion. There were no longer any fresh cases or first consultations. They were therefore receiving almost exclusively the five shillings fee. A few of the patients were treated in local hospitals.

DR. H. HUNTER referred to the negotiations which had taken place between 1919 and 1923 between the Department and the Federal Committee and to the acceptance of a scale of fees as published in THE MEDICAL JOURNAL OF AUSTRALIA of July 29, 1922, page 140. He did not think that it was a matter of great moment to any individual medical practitioner, but agreed that the fees being paid were quite inadequate.

After a short discussion it was resolved to ask the Council to forward the recommendation for a revision of the scale of fees to the Federal Committee.

Infant and Maternal Mortality.

DR. C. H. E. LAWES moved:

> That the Department of Public Health should receive the support and assistance of the profession in the investigation of the problems of maternal mortality and infantile mortality in the first month of life so that the investigation may be accurate and as complete as possible.

He informed the delegates that the Director of Maternal and Baby Welfare of the Department of Public Health of New South Wales had instituted an inquiry into the causes, incidence and prevention of death of mothers in child-birth and of their infants up to the age of one month. The Department had issued a circular letter addressed to medical practitioners and others together with two *questionnaires* in order that all the attendant circumstances of each maternal or infant death might be studied. The medical profession as a whole had not responded willingly at first owing to the fact that in certain instances the information had been sought directly from patients or from nurses without reference to the medical practitioner in charge. Recently the Director of Maternal and Baby Welfare had discussed this matter with the Medical Politics Committee and had assured the Committee that he and Dr. Sandford Morgan were anxious to obtain the information from medical practitioners and would approach them in the first instance in the future. The information was required for statistical and scientific purposes only and would be regarded as confidential. The Director of Maternal and Baby Welfare had further pointed out that if medical practitioners were not in a position to answer all the questions, he would be satisfied with the replies to those concerning the medical aspects and would seek information in regard to other matters from nurses in attendance or possibly from the patients themselves. Dr. Lawes thought that if a medical practitioner realized the significance of the investigation, he would do what he could to assist Dr. Morris.

DR. A. W. MOBBS seconded the motion. He was convinced that the investigation was doing good. On two occasions the investigation had led to the closing of hospitals that had been conducted in a lax manner. He thought that the inquiry would stimulate medical practitioners to keep careful notes of their confinement cases.

DR. K. S. MACARTHUR BROWN thought that medical practitioners should stand by Dr. Morris in his effort to reduce the mortality of mothers and their babies. He hoped that the local medical associations would support their members in this connexion.

DR. E. M. HUMPHERY assured the delegates that the Director of Maternal and Baby Welfare was anxious to

secure the cooperation of the medical profession. The motion was carried.

Accident Insurance.

DR. C. P. JACKSON, on behalf of the South-eastern Medical Association, pointed out that the insurance companies required certificates from medical practitioners in support of claims for compensation under their sickness and accident policies. The insurance companies refused to pay fees for the certificates, as it was held that the onus of proving disability resulting from certain diseases or from accident resided in the insured. On the other hand, the forms were frequently long ones containing many questions. The medical practitioner in filling in this form did not help the patient beyond enabling him to obtain the monetary compensation. On some forms it was printed that the fee for this certificate would be payable by the insured person. Dr. Jackson thought that the certificates were valuable to the insurance companies in that they protected them from being called upon to pay compensation when none was justifiable. He therefore moved:

> That in all cases where insurance companies require certificates filled in on their own special medical forms for sick or accident policies, the insurance company must pay the fee for the same direct to the medical attendant and such fee shall not be less than ten shillings and sixpence in any one case.

The motion was seconded by Dr. W. F. Simmons.

DR. H. HUNTER differed from Dr. Jackson. He held that the certificate was primarily in the interest of the patient. Unless the certificate was forthcoming, no claim would be allowed.

DR. A. M. GLEDDEN stated that some offices were discontinuing this kind of business because of the difficulty of certification. There was to some extent overlapping between these policies and the claims made under the *Workers' Compensation Act*. The motion was carried.

Misleading Advertisements.

DR. S. R. DAWES, for the Western Medical Association, moved:

> That the New South Wales Branch of the British Medical Association give consideration to the numerous and highly extravagant claims of healing powers by herbalists and others and meet them by some form of counter-advertisement.

At the same time DR. A. T. ROBERTS, on behalf of the Central Northern Medical Association, proposed a motion to the effect that it be a recommendation to the Council to make some attempt to control and correct the misleading medical articles which were constantly appearing in the daily press.

Dr. Dawes read several advertisements culled from different newspapers. In some publications, such as the *Geographical Magazine*, a counter-advertisement had been published. He thought that the Branch should either establish its own journal or contribute articles to the lay press to enlighten the public on matters of medicine.

DR. N. J. MACKAY thought that a counter-advertisement was open to the same objection as the primary advertising. As there was no seconder to Dr. Dawes's motion, the motion standing in the name of Dr. Roberts was taken in its stead.

DR. F. BROWN CRAIG mentioned that any correction of misleading statements or of dangerous claims of proprietary lines would have to be published under some authority. It would be impossible to sanction the use of the names of medical practitioners. The articles could, however, be issued by a committee. The New South Wales Branch possessed a publicity committee. The newspapers had never availed themselves of the offer of this committee to supply authoritative statements in connexion with matters of the moment referring to medical affairs. One-sided articles were published very frequently.

DR. A. G. BRYDON thought that there were occasions when the Council might do a considerable amount of good in this direction. There were certain difficulties that would have to be overcome, but he thought that the Council would be able to devise some acceptable scheme.

DR. W. F. SIMMONS asked whether any progress had been made in connexion with the publication of a popular health magazine. He was informed that an editorial committee had been appointed some years previously, but that the Directors of the Australasian Medical Publishing Company, Limited, had decided not to take any further steps until the financial position of the company had improved.

The motion was carried.

Advertisements by Medical Practitioners.

DR. H. HUNTER, on behalf of the Eastern Suburbs Medical Association, called attention to the By-Laws of the Branch governing advertisements. By-Law 9 (*b*) (x) provided that the announcement of resumption of practice was permitted after an absence from practice of not less than four weeks. The average general practitioner could not afford to leave his practice for more than a fortnight. It was the experience of most men that the loss of practice resulting from holiday absence usually extended over one month. He thought that members should be allowed to insert the resumption of practice advertisements in the newspapers after an absence of not less than two weeks.

DR. N. J. MACKAY seconded the motion. He agreed with Dr. Hunter that general practitioners rarely left their practice for more than two weeks at a time.

DR. W. F. SIMMONS thought that there was too much advertising in the daily press. He objected very strongly to the gratuitous advertisements which appeared so frequently in the personal columns.

DR. R. B. WADE thought it was a pity that the Branch sanctioned any advertisement of changes of address, commencement of practice or resumption of practice. He was convinced that these advertisements were unnecessary and he was of the opinion that they were undignified and objectionable. He would like to see them all abolished.

The majority of the delegates voted in favour of the motion.

Affiliated Local Associations.

DR. H. G. BRYDON stated that he had been instructed by the Northern District Medical Association to secure jurisdiction in local affairs for the local medical associations. He moved to this effect. He stated that a concrete case had led to the resolution of his association. It had been decided several years previously that it was inadvisable for any medical practitioner to establish a surgery in an outlying centre. Some members had done this without realizing that they were offending against this decision. These men had written to the secretary of the local association asking for permission to attend the surgeries in the outlying centres. The secretary, after having referred the matter to the committee of the association, had required the member to abide by the by-laws. The men had then written to the Council of the Branch and had obtained permission to establish surgeries in outlying districts. Dr. Brydon pointed out that the conditions in the country were better known by the local men than by the members of the Council. He thought that the local association should have more autonomy and a freer hand.

DR. S. R. DAWES seconded the motion and stated that the local conditions had probably not been known to the Council when they sanctioned the establishment of these surgeries.

DR. F. BROWN CRAIG stated that it was the policy of the Council of the Branch to refer all matters of local interest to the bodies concerned.

In the course of further discussion it was recognized that at times the by-laws of the local associations differed from those of the New South Wales Branch of the British Medical Association and that unless specific information were forthcoming the Council might have difficulty in making provision for local requirements. It was recognized that under the conditions of affiliation the local associations could not have more autonomy. The motion was lost.

Workers' Compensation Act.

DR. H. HUNTER, on behalf of the Eastern Suburbs Medical Association, called attention to the schedule of fees which had been adopted by the Branch and the licensed insurers to be applicable when the medical practitioner looked to the insurer and not to the patient for payment for services rendered. Dr. Hunter moved:

> That Schedule D be amended at the earliest convenient date with a view to raising the ordinary fees at a surgery, hospital or patient's home.

He stated that they had had two years' experience under this schedule. At first it was held that the scale would apply only to payments made by the insurer. In actual practice they found that the Workers' Compensation Commission looked upon Schedule D as a standard for fees. Dr. Hunter thought that it would be difficult to obtain higher fees than those set out in the schedule from the patient. He referred to one accident. There had been an injury to the muscles of the thigh necessitating five attendances. The injured worker had been unable to work for six or seven weeks. An account had been submitted for five attendances at ten and sixpence each. The insurance company agreed to pay the four visits at this scale and one visit at seven and sixpence. It was quite obvious that the licensed insurers, the Government Insurance Office and the Commission regarded the fees mentioned in Schedule D as the standard fees for insurance work. The motion was seconded by Dr. C. P. Jackson who thought that if they accepted reduced fees as normal payment in insurance work, their earnings as private practitioners would diminish very considerably.

After discussion the motion was put to the meeting and was carried.

DR. H. HUNTER moved:

> That Schedule D be amended to include a fee of one guinea for night attendance between the hours of 6 p.m. and 8 a.m. at either surgery, home or hospital.

The motion was seconded by Dr. A. G. Brydon.

DR. W. F. SIMMONS suggested that an additional fee of fifteen shillings might be acceptable for night work in the practitioner's own surgery and one guinea for night work either at the hospital or the patient's home.

It was suggested that the night time should be interpreted as being between the hours of eight o'clock in the evening and eight o'clock in the morning. The motion as amended was carried.

DR. H. HUNTER also moved:

> That Schedule D be amended to include special fees for minor operations, such as incising septic finger, removal of foreign bodies, suturing wounds *et cetera*, such attendance to be also paid for.

He stated that the object of this motion was to remove the anomaly existing at the time, of a practitioner being required to give long attendance in the treatment of septic infections, secondary infections and the like without having the right to charge for the repeated attendances and dressings. The motion was seconded by Dr. W. F. Simmons and carried.

DR. R. W. W. WALSH, on behalf of the Western Suburbs Medical Association, moved that Schedule D be amended to provide for a fee of three guineas for assistance at major operations. The fee prescribed was one guinea. The motion was seconded by Dr. N. J. Mackay and was carried.

On the motion of Dr. N. J. Mackay it was resolved that the local medical associations should be consulted by the Council when Schedule D was under revision. Dr. Mackay also moved that reasonable payment should be provided for after treatment. The motion was seconded by Dr. Walsh who suggested that after operations or treatment of fractures the fees fixed according to the scale should cover after treatment for a limited period. He proposed a fortnight. At the end of this time ordinary fees should be payable.

In the course of discussion Dr. R. B. Wade called the attention of the delegates to the fact that Schedule D was the result of careful negotiation and not a little opposition. The scale of fees had been drawn up on the understanding that the medical profession would derive considerable benefit by prompt payment and no bad debts. The insurers expected as a return for these advantages that concessions would be made. If Schedule D were examined closely, it would be found that the fees for the majority of the forms of treatment were reasonable fees. Difficulty arose in regard to certain injuries, such as septic wounds of the hands. Dr. Wade thought that it was possible that they could persuade the licensed insurers to alter the terms of payment for these injuries. It appeared that when a medical practitioner notified an insurer that an injured worker was suffering from the results of sepsis, the insurer often sent its own medical officer to supervise or control the treatment. He also reminded the delegates that Schedule D had been drawn up and accepted for one year's trial. It had been agreed that if either side wished to call a conference at the end of the year the negotiations could be reopened. He thought it would be advantageous to discuss the details of the schedule at an early date.

DR. A. W. MOBBS hoped that a conference would be held by the Council with the delegates of the local associations before any agreement was finally accepted.

DR. F. BROWN CRAIG stated that if the delegates desired it, he would arrange for a further meeting with the Council before the negotiations with the licensed insurers were completed. The Council would bear in mind all the points that the delegates had discussed.

The meeting carried Dr. Mackay's motion and also resolved to ask the Council to reopen negotiations with insurance companies and to arrange for a further meeting of the delegates in order that the views of the local associations might be taken into consideration while Schedule D was under revision.

DR. A. W. MOBBS, on behalf of the Balmain District Medical Association, moved that railway and tramway employees who were members of friendly society lodges and whose names appeared on the lists of medical officers of lodges, should be prevented from receiving treatment as lodge patients for injuries received in the course of their employment. He referred to the arrangements that existed in connexion with servants of the Railway and Tramway Department who were injured in the course of their work. These men had the option of drawing full pay in accordance with the provisions of the *Railway Act* during incapacity, or of claiming payment under the provisions of the *Workers' Compensation Act*. It was fairly obvious that the men would elect to receive full pay. He thought that these injured workers should not be entitled to lodge benefits.

DR. W. F. SIMMONS, in seconding the motion, referred to the correspondence in THE MEDICAL JOURNAL OF AUSTRALIA of January 19, 1929, page 87.

In the course of further discussion it was generally agreed that the friendly societies would be agreeable to the exclusion of injured railway workers from the medical benefits. The motion was carried.

New Building in Macquarie Street.

DR. W. H. CRAGO, the Honorary Treasurer, informed the delegates that considerable difficulty was being experienced in regard to the financing of the new building which was being erected in Macquarie Street. The New South Wales Branch had approximately seventeen hundred members. Only one hundred and eight had applied for debentures. It would be necessary to raise a very considerable sum of money before the building was completed and Dr. Crago hoped that every member of the Branch would recognize his obligation in this connexion. It had been determined to issue ten pound debentures as well as fifty pound debentures. He hoped that those who could not afford to invest fifty pounds, would take up one or more ten pound debentures. He pointed out in conclusion that the City Council had not yet paid compensation for the compulsory sale of 30-34, Elizabeth Street.

Votes of Thanks.

The usual votes of thanks were accorded to the President and members of the Council of the New South Wales Branch.

NOMINATIONS AND ELECTIONS.

THE undermentioned have been elected members of the Victorian Branch of the British Medical Association:

Thomson, David Scott, M.B., M.S., 1929 (Univ. Melbourne), 12, Cosham Street, Middle Brighton, S.5.
Burke, Frank David, M.B., B.S., 1929 (Univ. Melbourne), 8, Coppin Street, East Malvern, S.E.5.
Howard, Russell N., M.B., B.S., 1929 (Univ. Melbourne), Melbourne Hospital.
Gerstman, Samuel Rudolph, M.B., B.S., 1929 (Univ. Melbourne), 113, Addison Street, Elwood, S.3.
Gleadell, Leslie Westfield, M.B., B.S., 1929 (Univ. Melbourne), "Merida," Rennison Street, Beaumaris, S.10.
Nattrass, Roland Hodgson, M.B., B.S., 1929 (Univ. Melbourne), 66, Buckley Street, Essendon, W.5.
Adamson, John Francis, M.B., B.S., 1929 (Univ. Melbourne), 67, Kooyongkoot Road, Hawthorn, E.2.
Edmonds, Horace Joseph Carlyle, M.B., B.S., 1929 (Univ. Melbourne), Amelia Street, Glen Iris, S.E.6.
Grove, John Lewers, M.B., B.S., 1929 (Univ. Melbourn), Methodist Ladies' College, Kew, E.4.
Osborn, Leslie Andrewartha, M.B., B.S., 1929 (Univ. Melbourne), Queen's College, Carlton, N.3.
Williams, Stanley William, M.B., B.S., 1929 (Univ. Melbourne), 6, Carrington Grove, St. Kilda, S.2.

THE undermentioned have been nominated for election as members of the New South Wales Branch of the British Medical Association :

Flattery, James Martin, M.B., Ch.M., 1922 (Univ. Sydney), H.M.A.S. *Penguin*, Garden Island, Sydney.
Bradley, Gwendolyn Ruth, M.B., B.S., 1928 (Univ. Sydney), 85, Dalhousie Street, Haberfield..
Osborne, John William, M.B., B.S., 1928 (Univ. Sydney), Sydney Hospital, Sydney.
Manion, John Allan, M.B., Ch.M., 1926 (Univ. Sydney), 134, Boulevard, Dulwich Hill.
Cook, Leslie James, M.B., B.S., 1928 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.

THE undermentioned have been elected members of the New South Wales Branch of the British Medical Association:

Appel, Godfrey Hugh, M.B., B.S., 1928 (Univ. Sydney), Women's Hospital, Crown Street, Sydney.
Bradley, Gwendolyn Ruth, M.B., B.S., 1928 (Univ. Sydney), 85, Dalhousie Street, Haberfield.
Flattery, James Martin, M.B., Ch.M., 1922 (Univ. Sydney), H.M.A.S. *Penguin*, Garden Island.
Osborne, John William, M.B., B.S., 1928 (Univ. Sydney), Sydney Hospital.
Saleh, Michael George, M.B., B.S., 1928 (Univ. Sydney), 282, Edgecliff Road, Edgecliff.

THE undermentioned has been elected a member of the South Australian Branch of the British Medical Association:

Thomas, Marjorie Phyllis, M.B., B.S., 1927 (Univ. Adelaide), Adelaide.

Obituary.

JAMES RAMSAY WEBB.

THE following notes in regard to the late Dr. James Ramsay Webb have been supplied by Dr. Harold Downing after consultation with Dr. W. R. Boyd.

James Ramsay Webb graduated M.B., B.S. at Melbourne in 1889 and first came into prominence a few months later when resident surgeon at the Stawell Hospital. At a time when cerebral localization was being discussed as a new thing, Webb localized an abscess in the brain, trephined and found pus where he expected it, quite to the surprise of his seniors at Stawell and elsewhere.

Proceeding to England, he obtained the F.R.C.S. (England) in 1895. On returning to Melbourne he purchased the practice in Footscray where his heaviest work was done, although he was honorary surgeon to the Williamstown Hospital and also carried on a surgical practice in Collins Street.

The Australian public heard of Dr. Ramsay Webb in April, 1910; the occasion was a valedictory evening which the people of Footscray tendered to him prior to a trip to England. He then foretold the proximity of a European war and spoke of the time when Australians would value "footballers at two a penny and cricketers would be given away with a pound of tea."

Melbourne heard of Dr. Webb again in 1919 when he was President of the Victorian Branch of the British Medical Association at the time when that body was moving to obtain better terms for those of its members who were doing lodge work.

Ramsay Webb and Andrew Honman worked in association at "Bethesda" from its inception and this hospital owes much to their friendly collaboration and to the ideals of nursing which they established there.

Early in the war he realized the need of our troops for trained and experienced surgeons and offered for service. After two years' service in Egypt and England he proceeded to France as Lieutenant-Colonel rather than accept an administrative position with the rank of Colonel in England.

Webb's friends knew him as very loyal and trustful, invariably considerate and gentle and the soul of honour. For many years he knew that he was suffering from the complaint which ultimately was fatal, and he knew that Dr. Downing knew it; they met very frequently, yet never did he mention it, except to say once: "Don't tell my wife."

To his patients he was always fair and kind, a very hard worker, but one whom tiredness never made irritable.

To his intimates Dr. Webb was a pleasant and cultured friend and a very wise adviser without a trace of meanness or paltriness.

MELBERT IAN McLEAN.

WE regret to announce the death of Dr. Melbert Ian McLean which occurred at Perth on October 5, 1929.

Correspondence.

ULTRA-VIOLET RAYS.

SIR: Some months ago the public press published a scathing report issued by the British Medical Research Council on the efficacy of ultra-violet rays. The report was based on certain tests carried on by Dr. Dora Colebrook, but the result of those tests was not published coincidently with the Research Council's report. Now, apparently, Dr. Colebrook's tests have come to light. But there is a danger that this belated report may be regarded as fresh evidence against ultra-violet rays and not as that on which the Research Council's original attack was based.

Since the attack was made, eminent medical men in England, the Continent and America have demanded the publication of Dr. Dora Colebrook's tests which have only now been delivered to the public. Until we learn the exact details of these experiments, it is impossible to criticize them.

Dr. Eidenow whose name is well known in connexion with ultra-violet rays, asked the British Research Council to say if its report had been submitted to its Committee

on Light prior to publication. This request was not complied with, suggesting that the only committee entitled to speak on this matter had not been consulted by the Research Council.

A large number of eminent physicians of European reputation have testified in the columns of *The British Journal of Actino-Therapy and Physio-Therapy* their belief in the efficacy of ultra-violet rays, while those in Australia who have made use of the rays, have had gratifying results. Like other remedies, the ultra-violet rays are not of universal application nor uniformly successful, but there is no doubt they are beneficial in many conditions apart from rickets and surgical tuberculosis, where their value has been triumphantly proven.

Yours, etc.,

GERALD R. BALDWIN, F.R.C.S. (Eng.).

32, Collins Street,
Melbourne, Victoria.

THE RETURNED MEDICAL OFFICERS' DINNER.

SIR: On behalf of the committee who organized the returned medical officers' dinner, I wish to express regret that we had to refuse any nominations.

We accepted all who notified us up to the day before, but as we had to send in our final numbers on September 4 and as we were then trying to fit 159 into 150 seats, we were forced to refuse those who rang up on September 5, the day of the dinner.

I would like to suggest that the names of all who served in the Australian Army Medical Corps, be marked in some way in the British Medical Association list and if members would reply promptly to circulars, the secretary's work would be lessened. All who served and have since qualified, are eligible for membership in this association which meets from time to time to dine together.

Yours, etc.,

A. H. MOSELEY,
Assistant Honorary Secretary.

8, Nelson Street,
Woollahra.
September 27, 1929.

UTERINE PROLAPSE.

SIR: In the interesting discussion on this subject at the recent congress, as reported in your issue of October 5, I find myself generally in agreement with the views expressed by Dr. H. C. E. Donovan, of Sydney.

On the other hand, I feel it my duty to take exception to the following statement given on page 496: "This (the cure of prolapse) was sometimes done by operation directed at the cardinal ligaments, but he considered that this was unjustifiably extensive, as it involved a dissection nearly as great as that involved in Wertheim's operation."

This is not correct. The dissection is not nearly so difficult or dangerous as that involved in a Wertheim, as will be seen from the late Arthur Nyulasy's directions for carrying out his operation of "looping the cardinal ligaments," which is done in this way. The cardinal ligament on each side is exposed as in the operation of subtotal hysterectomy, by turning down the bladder from the uterus and top of the vagina. The cardinal ligament is detached from the posterior layer of the broad ligament by blunt dissection with the forefinger. The uterine artery is now seen coursing along the anterior surface of the cardinal ligament (and may or may not be tied, as preferred), while the ureter may be seen and felt without difficulty. The cardinal ligament is hooked up as a loop on the forefinger, a threaded pedicle needle is passed through this loop to draw it forward and it is fixed by a couple of stitches to the front of the cervix, about the level of the internal *os*. The same is done with the other cardinal ligament. Finally, as in the subtotal hysterectomy, the divided peritoneum of the uterus and broad ligament is brought together by a continuous catgut suture and the operation is completed by closure of the abdomen.

Compared with a Wertheim, this operation is simplicity itself, but it is advisable to have a high Trendelenburg position, a good light and good relaxation of the abdominal muscles.

Yours, etc.,

FRANK A. NYULASY.

Melbourne,
October 6, 1929.

THE GONOCOCCUS.

SIR: In the issue of the journal dated September 28, 1929, Dr. E. P. Dark takes exception to the statement that the gonococcus can withstand a temperature of 113° F.. Several workers seem to have been able to grow them at that temperature; possibly the media used could account for the different behaviour of the cultures. I did not suggest that heat did no good in chronic gonorrhœa; I believe it does help in prostatitis and cervicitis. I think that it is useless to try to take a "sitting shot" at the gonococci by using a temperature of 113° F. with the idea of killing the infecting organism. The disease is not sufficiently localized and the fact that some people have grown the germs at a high temperature makes the procedure a doubtful one.

With regard to the temperature the urethra will stand, I found that it could not always stand 105° F. in treating chronic littritis and urethral infiltrations. I have never applied diathermy to the urethra of the male in the acute or subacute disease. Because the cervix and urethra recover after being heated to 120° F. and 115° F. respectively, it does not necessarily mean that such temperatures are the thing in treating gonorrhœa.

Yours, etc.,

JAS. M. O'DONNELL.

141, Macquarie Street,
Sydney.
October 1, 1929.

CHRONIC PULMONARY INFECTIONS.

SIR: In the last issue of our journal (October 5, 1929) there is a report of the combined meeting of the Section of Oto-Rhino-Laryngology, the Section of Pædiatrics and the Section of Radiology and Medical Electricity in regard to the subject of chronic pulmonary infections in relation to the upper respiratory tract. In that report I am accredited with the following statement:

> If iodized oil was injected into the bronchial tree, a general anæsthetic should be used and the practitioner should be present at the screening.

As this procedure is so opposed to the methods which I use, except in only a very small group of cases, I request that you quote the full clause which is as follows:

> In very young children both the introduction of the oil and the subsequent X ray pictures are far from satisfactory, since the injection, to be at all reliable, must generally be done under a general anæsthetic *viâ* the bronchoscope and it is almost impossible to get good pictures under these conditions, owing to the uncontrolled respiratory movements and to the rapid heart beats. It is useless, moreover, to allow the patient to regain consciousness from an anæsthetic and then take the pictures, for the vomiting usually associated with the anæsthetic by ejecting the oil nullifies one's efforts. However, if the practitioner is present at the "screening," he can learn a great deal concerning the position, form and extent of the dilatations.

Yours, etc.,

R. GRAHAM BROWN.

Preston House,
Queen Street, Brisbane.
October 11, 1929.

Corrigendum.

OUR attention has been directed to an omission in our report of Dr. L. M. McKillop's speech in the discussion on cancer research at the plenary session of the Australasian Medical Congress (British Medical Association) on page 473 of our issue of October 5, 1929. In his reference to the work of Lockhart Mummery he stated that rectal cancers almost always started as papillomata.

Books Received.

THE USE OF STANDARD TREATMENTS IN THE CAMPAIGN AGAINST DISEASE IN THE TROPICS, by J. Neil Leitch, M.D., B.S. (London), M.R.C.S. (England), L.R.C.P. (London), D.T.M. & H. (England), F.R.G.S., F.Z.S. With an introduction by G. Carmichael Low, M.D., F.R.C.P.; 1929. London: H. K. Lewis and Company, Limited. Demy 8vo., pp. 76, with illustrations. Price: 6s. net.

LANDMARKS AND SURFACE MARKINGS OF THE HUMAN BODY, by L. Bathe Rawling, M.B., B.C. (Cant.), F.R.C.S.; Seventh Edition; 1929. London: H. K. Lewis and Company, Limited. Demy 8vo., pp. 106, with illustrations. Price: 6s. net.

Diary for the Month.

Nov. 5.—Tasmanian Branch, B.M.A.: Council.
Nov. 5.—Eye, Ear, Nose and Throat Section South Australian Branch, B.M.A.
Nov. 6.—Western Australian Branch, B.M.A.: Council.
Nov. 7.—South Australian Branch, B.M.A.: Council.
Nov. 7.—New South Wales Branch, B.M.A.: Branch.
Nov. 8.—Queensland Branch, B.M.A.: Council.
Nov. 8.—Eastern Suburbs Medical Association, New South Wales.
Nov. 12.—Tasmanian Branch, B.M.A.: Branch.
Nov. 12.—New South Wales Branch, B.M.A.: Ethics Committee.
Nov. 13.—Victorian Branch, B.M.A.: Branch.

Medical Appointments.

Dr. Ulric Lyle Brown (B.M.A.) has been appointed Government Medical Officer at Gresford, New South Wales.

* * *

Dr. Alfred John Spencer Cecil Roberts (B.M.A.) has been appointed Government Medical Officer, Toowoomba, and Visiting Medical Officer to the Farm Home for Boys, Westbrook, Queensland.

* * *

Dr. Patrick O'Shea (B.M.A.) has been appointed Medical Officer, Department of Mental Hospitals, New South Wales.

* * *

Dr. David Thomas Rushton Smith (B.M.A.) has been appointed Government Medical Officer at Blackall, Queensland.

* * *

Dr. Frank Frederic Coffey (B.M.A.) has been appointed Acting Government Medical Officer at Tully, Queensland.

Medical Appointments Vacant, etc.

FOR announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xx

CAIRNS HOSPITAL BOARD, QUEENSLAND: Resident Medical Officer.
COMMONWEALTH DEPARTMENT OF HEALTH: Medical Officer.
GUY'S HOSPITAL MEDICAL SCHOOL: M.R.C.P. Course.
LAUNCESTON PUBLIC HOSPITAL, TASMANIA: Resident Medical Officer (Male).
ROYAL ALEXANDRA HOSPITAL FOR CHILDREN, SYDNEY: Honorary Surgeon, Honorary Assistant Ophthalmic Surgeon.
SYDNEY HOSPITAL, SYDNEY, NEW SOUTH WALES: Clinical Assistants.
THE RACHEL FORSTER HOSPITAL FOR WOMEN AND CHILDREN, SYDNEY: Honorary Clinical Assistant.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 21, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District United Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham United Friendly Societies' Dispensary. Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney. North Sydney Friendly Societies' Dispensary Limited. People's Prudential Assurance Company, Limited. Phœnix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Members accepting appointments as medical officers of country hospitals in Queensland are advised to submit a copy of their agreement to the Council before signing. Brisbane United Friendly Society Institute. Stannary Hills Hospital. Mount Isa Hospital.
SOUTH AUSTRALIAN: Secretary, 207, North Terrace, Adelaide.	All Contract Practice Appointments in South Australia. Booleroo Centre Medical Club.
WESTERN AUSTRALIAN: Honorary Secretary, 65, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Medical practitioners are requested not to apply for appointments to positions at the Hobart General Hospital, Tasmania, without first having communicated with the Editor of THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales.

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